

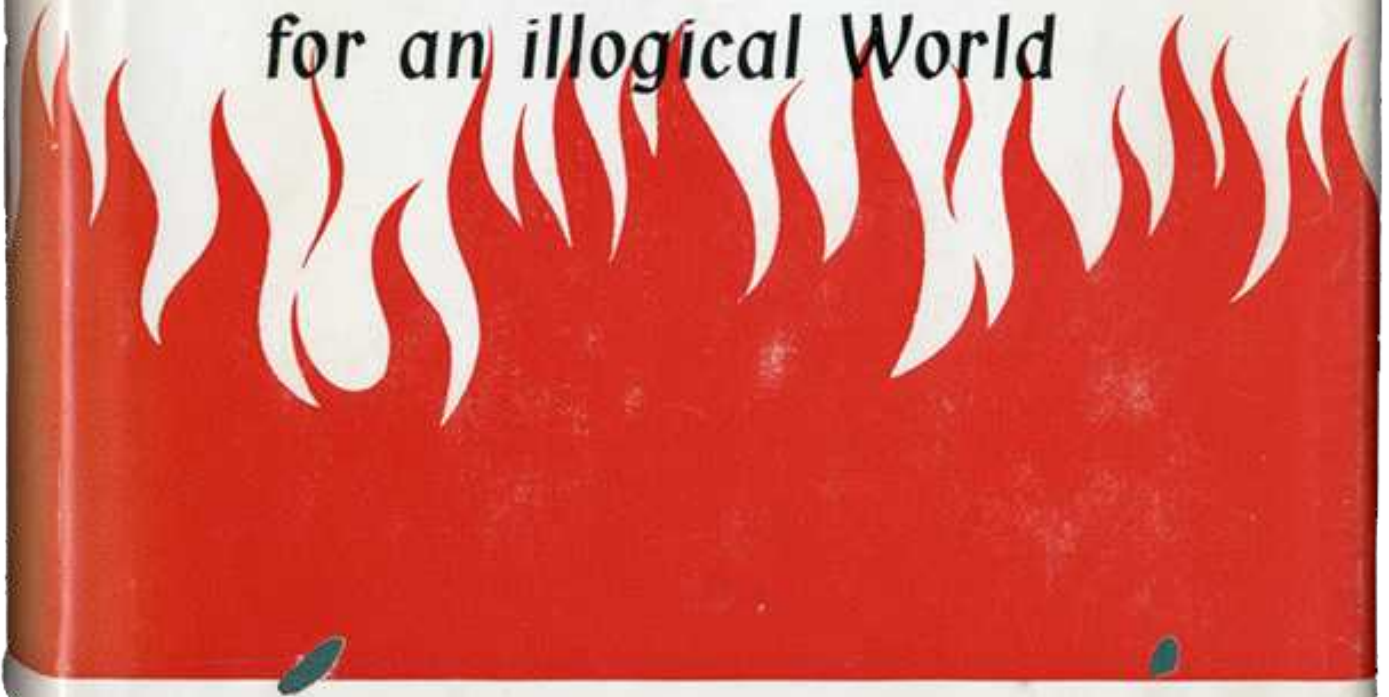
C. K. Bliss

Semantography

(Blissymbolics)

Second enlarged Edition

A logical Writing
for an illogical World



C. K. Bliss

Semantography

(Blissymbolics)

Second enlarged Edition

A simple system of 100 logical pictorial symbols, which can be operated and read like $1 + 2 = 3$ in all languages. It can be typed and printed, and used in international communication and commerce, industry and science. It contains also a simple semantics, logic, and ethics, which even children can learn to use in their problems.

SEMANTOGRAPHY (BLISSYMBOLICS) PUBLICATIONS

(non-profit)

2 Vicar Street, Coogee, Sydney, Australia

A logical Writing for an illogical World

Prophecy and Fulfillment

“A Universal Symbolism, very popular, very agreeable to the people . . . might be introduced if small figures were employed in the place of words, which would represent visible things by their lines, and the invisible, by the visible, which accompany them.

This would be of service at first for easy communication with distant nations, but if introduced also among us, without however, renouncing ordinary writing . . . would be useful in giving thoughts less absurd and verbal than we now have.

I think these thoughts will some day be carried out, so agreeable and natural appears to me this writing for rendering our conceptions more real.”

Gottfried Wilhelm Leibnitz (1679).

“Bliss realized the ambition of the great mathematician Leibnitz.”

Prof. Oliver Leslie Reiser (1951).

“Bliss’ work provides something of real importance.”

Prof. Julian Huxley (1954).

Supporting Bliss’ work means “performing an important service to mankind.”

“If schools throughout the world (would) clarify the use of words calculated to promote passion, the existing hatred between nations, creeds, and political parties would very rapidly diminish, and the preservation of peace throughout the world would become an easy matter.”

Bertrand Russell (1950).

“Ideographic writing will surely achieve the final victory over phonetic writing.”

Prof. Basil Hall Chamberlain (1905).

STOP PRESS — LATEST NEWS

NEW YORK, U.S.A. The United Nations have decided to mark their 20th anniversary by inaugurating International Co-operation Year, with the promotion of pictorial symbols which can be read in all languages.

CANBERRA, Australia. Following the decision of the United Nations, the Australian Government Department of External Affairs submitted the work Semantography of the Australian scientist C. K. Bliss (which has been praised by eminent scholars) to the Australian National University for an examination of its potential value.

This proved favourable, and in consequence thereof, the Department authorized the United Nations Association of Australia to recommend Bliss' work to the United Nations for adoption and promotion.

SYDNEY, Australia. Bliss remains sceptical. For 16 years he approached national and international authorities responsible for the slaughter on the roads. He offered free his pictorial symbols for any road warning needed.

Bliss points to the fact that the former League of Nations had recommended some pictorial road symbols, which some states adopted, but others rejected. Why?

The cause is a catastrophic brain perversion called bureaucracy, which makes many an official loath to admit that another guy has a better idea. But bureaucracy is not confined to officialdom. It is found in business too.

NEW YORK, U.S.A. The money brought in by millions of tourists has become a major source of income for many countries. However, the greatest hindrance is the Babel of languages.

Realizing this, American travel, hotel, and business groups have instituted the International Committee for Breaking the Language Barrier (ICBLB), by the use of pictorial symbols.

Bliss submitted his 100 basic pictorial symbols which can be used in combination for any meaning needed in road, rail, ship and plane travel, as well as in hotels, shops, theatres, etc., likewise for written or typed correspondence with an adapted typewriter of ordinary size, which carries also the small letters of the alphabet.

So far, the ICBLB has ignored Bliss, has proposed instead among other

obsolete and inadequate symbols, the ancient astrological signs for Mars and Venus for men's and women's wash-rooms.

ALBUQUERQUE, U.S.A. James L. Evans, Ph.D., Vice-President of Teaching Machines Inc., and a pioneer in new teaching methods, is already conducting a research program in using the basic Blissymbols for the teaching of English and any other languages.

This may well revolutionize the outdated method of language teaching. Moreover, the logical simplicity of the symbols will in turn lead to the gradual removal of illogical irregularities in English and in other languages.

Blissymbols, which can be read in all languages form the bridge to the corresponding words in English. This in turn, will lead to the spoken international language of mankind.

This language (not Esperanto) is already the mother tongue of hundreds of millions of people. It is the virtual international language of commerce, industry, and science. It is taught in all countries of the world. It is English.

Bliss has also worked out an international science abstract in English and the symbols underneath. This enables foreign scientists to read it in their own languages, and to pick up the corresponding words in English.

CAPE KENNEDY, U.S.A. The first commercial satellite "Early Bird" has been launched, and two more will follow, providing television shows for the whole world. Sub-titles will be needed, but in how many languages?

Bliss proposes 5 minutes TV lessons with animated Disney figures dissolving into the pictorial symbols. This will teach all viewers to read any subtitle in their own languages, and to pick up the corresponding words in the English subtitles.

But the greatest advantage of this ONE WRITING FOR ONE WORLD is its simple semantics and logic, which enable everyone, even children, to recognize those vague, ambiguous, illogical and false words, which are used by demagogues and dictators to instigate hate, and the horrors of war.

Here we have at last A LOGICAL WRITING FOR AN ILLOGICAL WORLD.

Z
102
B55
1965

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**PUBLICATIONS ON SEMANTOGRAPHY
(BLISSYMBOLICS)**

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THE SEMANTOGRAPHY SERIES, by C. K. Bliss and other
Writers. Library of Congress Catalog Card No. 55-14351. Over
200 issues from 1949 to 1965, among which are the following
volumes:—

UNIFIED SYMBOLISM FOR WORLD UNDERSTANDING IN
SCIENCE, by Professor Oliver L. Reiser, University of Pittsburgh
(1954).

SEMANTOGRAPHY AND THE ULTIMATE MEANINGS OF MAN-
KIND, by C. K. Bliss (1954).

IN SEARCH OF A LOGICAL GOD, by C. K. Bliss (1958).

EVERYONE'S SIMPLE LOGIC AND SEMANTICS, by C. K. Bliss
(1964).

ONE WRITING FOR ONE WORLD, by C. K. Bliss (1965).

THE LIFE STORY OF ONE WRITING FOR ONE WORLD, by C. K.
Bliss (1965).

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2 VICAR STREET, COOGEE, SYDNEY, AUSTRALIA

182070

DEDICATION

This work is dedicated to mankind, and to the libraries of mankind,

in the name of my parents, who gave me my life and ideals to live by, and who worked hard, so that they could send me to the university, **and in the name of Claire**, my companion and co-worker, who inspired and helped me, and who died heartbroken in 1961 after 15 years of pleadings with the educational authorities of mankind to take an interest in my work. There was no response, in spite of the praise by eminent scholars.

Now that old age is overtaking all my endeavours, I thank all my friends for their encouragement. I ask all my readers to forgive the shortcomings of my typewritten manuscript, now photographed and printed in this book, and I greet all my new friends of the coming generations.

May you carry on where I left off. May you be spared the hells I went through as a prisoner of the war of words in the darkest holes on earth, where millions were put to death because of words.

May you realize that we must overcome not only non-understanding in different languages, but also non-understanding in the same language. To overcome hatred, violence and war, we must learn to overcome the words which lead to hatred, violence and war within the families, within the nations, and within the family of nations.

This was the dream of the great mathematician Leibnitz 300 years ago. Now that his dream has been realized, how long will it take until this work will be taught in the schools of the world?

It is up to you, my young friends, to speed it up—before it is too late, before more millions of people will die because of words.

THANKS

My thanks to those scholars, academic colleagues, students, and lay people, who recognized the value of my work, and who gave me encouragement and help, at least in words. Their names, and some of their sayings, are contained in the Semantography Series (see the catalog p. 796ff). Some excerpts are reprinted in the introductory pages.

My thanks also to the scholars, authors, and their publishers, to the editors of newspapers, magazines, and scientific journals, who have given me their kind permission for reprinting the quotations, which have convinced me, and may convince others, that work on this idea is worthwhile.

I must also thank those people who have given me honourable membership in the exclusive order of scholarly cranks. Every new idea seems strange, and even absurd to many people. Max Planck said that a new idea does not gain ground by convincing its opponents. It gains acceptance as they die out, and new minds take over. But alas, when this happens, the pioneer is usually dead, too.

The 700 large-sized pages of the first edition, filling 3 volumes, were typed and mimeographed as a manuscript by Claire and myself from 1946-1949. Without her, nothing would have come of it. Words cannot express my thanks to her. We hoped for acceptance, and a grant to print a properly typeset book. We hoped in vain. Now that her death has left me alone, all I can do is to arrange the photographic reproduction of the first edition, together with new typeset pages, and a typed dictionary index.

The typeset pages of this second enlarged edition were printed by the following Sydney firms. The issues of the Semantography Series, and the dustjacket, by the Messenger Print. My thanks to Mr. H. M. Collier, Mr. R. J. Hind, and the staff. The other typeset pages were set by The Fleet Composition Service Pty. Ltd. My thanks to Mr. B. J. Reade, Mr. F. E. Holmes, and the staff.

This second edition of the 3 volumes, reduced photographically, and bound in one handy volume, was photo-offset printed by the Tokyo publishing division of the American publisher Charles E. Tuttle Co. Inc. of Rutland, Vermont, U.S.A. My thanks to Mr. Charles E. Tuttle, Mr. Roland A. Mulhauser, Mr. Satoru Iwamoto, and the staff, for the excellent reproduction of a very imperfectly typed and mimeographed manuscript.

My thanks to all my readers for understanding my difficulties, for realizing that I am an inventor, not a writer, for excusing therefore the many awkward expressions and corrections, also the many mistakes still abounding, and the small and thin type due to the photographic reduction in size. My thanks to you for kindly overlooking all my faults. The blank pages at the end are reserved for your constructive corrections and suggestions.

My special thanks to my good brother Henry Bliss, and my good friend Mr. Richard Henry Boyt, for their continuous help. They are, together with myself, the trustees of the Semantography Trust Fund, set up by the late Claire Bliss. They will carry on, when I too have left this earth and joined my Claire.

SHORT OUTLINE OF CONTENTS

For the detailed list of chapters see page 67
but watch out for double page numbers
due to the following reasons:

This second edition in one handy volume is a photographically reduced reproduction of the 3 large-sized volumes of the first edition. But more reading matter has been added, and therefore more pages. Hence new page numbers were necessary.

But the page numbers of the first edition had to be retained, because of cross-references in the photographed text, and in other publications. Therefore: **old page numbers are shown in brackets below the new page numbers.**

Sample page no. 183 shows below in brackets and smaller type thus
(51) the page number of the first edition.

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FROM WORLD WRITING TO BLISS

In 1942 I named my symbols **World Writing**, then chose in 1947 an international scientific term **Semantography** (from Greek **semanticos** significant meaning, and **graphein** to write).

The term **Semantography** became a tongue twister. It has been misspelt in journals and books, and even misused as a general term for forthcoming competing symbols.

My friends argued that it is customary to name new writing systems after the inventors, as for instance Pitman, Gregg, etc. They, therefore, recommended the new term **Blissymbolics**, or **Blissymbols**, or simply **Bliss** in order to distinguish this work, because it contains an innovation not to be found in any other writing ever invented by man.

This new **One Writing for One World** is not only a new kind of shorthand (see below), which can be read in all languages. It contains also a simple **logic**, **semantics**, and even **ethics**.




No one argues to-day whether $2 + 2 = 4$ or perhaps 5. Later generations with a little training in this new "Algebra of Thought" will instantly recognise any illogic, ambiguity, fallacy and demagogy in any statement they hear, or read, or think.

Family, community, and political quarrels, carried on to-day with illogical and ambiguous words, will have to cease. Instead of obstinate opposition, there may be calm co-operation. Instead of bitterness, there may be bliss.


ALL SYMBOLS IN THIS BOOK

are drawn **FIVE TIMES LARGER** in size than they would appear in print. This is done in order to show their extreme simplicity, and their maximum saving in space and time when compared with ordinary alphabetical letters.

This is therefore a new unheard-of shorthand writing which can be read in all languages. The following example will illustrate this:

This symbol  means a letter. These two arrow symbols  mean to and fro, forward and backward, etc. Hence this compound symbol  means letter correspondence.

But if these symbols are drawn 5 times over-size, as they are drawn throughout this book, then the alphabetical letters would have to be correspondingly 5 times larger too, as shown below:

 letter
correspondence

THE STORY OF THIS PIONEERING WORK

and the story of this book, first mimeographed with all the faults and imperfections of a typewritten manuscript, and now reproduced by the photo-offset process, is the old story of most pioneering works ahead of their time, not understood and recognized, and without funds to produce a finely written and printed book.

In 1950 Bertrand Russell wrote: "Any man or men who will spend the money necessary to get this work printed will, in my opinion, be performing an important service to mankind."


Year after year, the inventor went a-begging for a publication grant, but found no men willing to perform this "important service to mankind."

You, dear reader, must therefore kindly excuse all the shortcomings of this book. Please see beyond them the vision of a great idea, which could bring understanding and unity to our divided world.

Babel, mankind's greatest handicap

Slowly mankind begins to realize that the learning of languages in school will not overcome Babel. Even an international language like Esperanto will not help, because the billions of people go on babbling in their thousands of different mother tongues.

Slowly mankind begins to realize that the only way to overcome Babel are pictorial symbols which can be read and understood in all languages.

On the motor roads of the world, where understanding in all languages is a matter of life and death, road warnings in the native languages are being taken down, and replaced by pictorial symbols. A bent arrow  means a CURVE in all languages.

This book belongs to the new generations

A few educators have made private tests, and they reported that children were "fascinated and thrilled" by the simplicity, semantics, logic, and ethics contained in these symbols.

A time will come when these pictorial symbols will be taught to the children of the world as a new medium of understanding across all languages. Then this book will be ready to serve mankind.

Meanwhile may it rest in the libraries of the world. May it come into the hands of young people who will recognize its value, and who will pioneer this new world-embracing idea. It is dedicated to them and to all mankind.

The vision of one writing for one world

Today blind mankind write in Braille.

**A day will come when seeing and thinking
mankind will write and think in Bliss.**

This is the vision of the friends of Bliss, who realize that no man has done this before:

A writing which can be read in all languages

A writing which can give literacy to all

A writing which can expose illogic and lies

A writing which can demask the demagogues

**A writing which contains a simple semantics and logic which even
Children can use for their problems**

**A writing which contains a universal ethics without religious legends,
and acceptable to all**

**A writing which can unite our world, so disastrously divided by languages,
legends, and lies**

The story of semantography

The inventor of semantography, Charles K. Bliss, was born in the Babel of old Austria, where 20 nationalities hated each other, mainly because they spoke and thought in different languages.

In 1922 he graduated from the Vienna University of Technology, and entered the electronic industry as a research chemist. Soon he realized that the Babel of scientific publications is the greatest handicap to scientific research. This in turn led him to the following thoughts.

People, be they professors or primitives, don't like to learn foreign languages, and this includes Esperanto. Everyone likes to talk in his familiar mother tongue. However, $1 + 2 = 3$ can be read in all languages. H_2O means water in all languages, and the pictorial symbols of radio wiring diagrams are also understood in all languages.

Pictorial symbols are already a reality on the highways of the world. Motorists traverse linguistic frontiers in a matter of hours, and some die in a matter of minutes if they can't read the warning signs in the native languages.

But a Babel of misunderstanding exists even between people who speak the same language. Demagogues, who want to dominate their nation and the world, use vague, ambiguous, and fallacious words. Children and adults are not taught in any school how to recognize such words, which bring misery upon mankind.

Adolf Hitler used demagogic language to drive his nation and the world into war. When he overran Austria, Bliss was deported to the death camps of Dachau and Buchenwald. He went through horrors from 1938 to 1939. He saw how men can be induced by words to kill with a clear conscience.

Freed through the heroic fight of his good wife Claire, they fled to China. There Bliss saw in amazement how people, who speak different languages, can nevertheless read the same book and the same paper, and can write letters to each other.

Scholars of China's history informed him that the pictorial and ideographic writing of China was the main unifying factor which brought together people of different languages, and formed them into the largest nation on earth. Even the many invaders learned to read it in their own languages, and it made them Chinese in the end.

These scholars are convinced that a European nation would have been a reality centuries ago if Frenchmen and Finns, Englishmen and Estonians, Greek and Germans, Romans and Russians, and all the others, had a common bond in a common writing which they all could read in all their languages.

Bliss saw in Shanghai schools that children pick up these partly pictorial symbols much quicker than the laborious alphabet. He saw that only 1500 basic words, expressed in symbols, are sufficient for reading the papers, and for writing letters.

For centuries Chinese governments tried to introduce a Western-type phonetic writing. It always failed. The Japanese have a phonetic writing since the 9th century. Yet, the 1500 symbols they took over from Chinese writing still prove simpler and better, and this in a highly industrialized country where 100 million people speak one language only. They use their phonetic letters to indicate grammatical inflections only.

Professor Basil Hall Chamberlain summed it up in the amazing prophecy: "**Ideographic writing will surely achieve the final victory over phonetic writing.**" It can be read in all languages. It can unite the world.

Bliss soaked all this up in ever growing enthusiasm. Then he set to work to develop a modern, simple, scientifically constructed, pictorial symbol writing, which can be typed on a typewriter of ordinary size, and can be used in international commerce and communication, industry, and even science.

And then he learned of the dream of Leibnitz.

A mathematician's dream came true

Leibnitz, the great mathematician, dreamed of this idea 300 years ago. He was fascinated by the writing of the Chinese, but dismayed by its archaic complexity. He speculated therefore about a Universal Symbolism "better than theirs." It should be simple, popular and pictorial. It should also contain a simple mathematical logic as an "Algebra of Thought," just as anyone can read $1 + 2 = 4$ in any language, and can realize that it contains a lie.

But for 300 years, linguists and logicians, mathematicians and philosophers considered Leibnitz' idea a mere "philosopher's speculation," impossible to realize.

Prof. I. A. Richards and C. K. Ogden wrote in 1922: "Leibnitz' speculation still remains where Leibnitz left it."

Prof. E. T. Bell wrote in 1937: "The very diffusion of Leibnitz' genius made him capable of the dream which Archimedes, Newton and Gauss missed, the 'Universal Symbolism.' Others may bring it to realization. Leibnitz did his part in dreaming it to be possible."

Prof. Oliver L. Reiser told in 1951 the American Association for the Advancement of Science: "Bliss realized the ambition of the great mathematician Leibnitz."

Bertrand Russell wrote in 1950: "I think very highly of it. The logical analysis is good. The symbols are ingenious and easy to understand. Any man or men who will spend the money necessary to get this work printed will, in my opinion, be performing an important service to mankind."

Prof. Julian Huxley wrote: "Bliss' semantography provides something of real importance."

Prof. G. P. Meredith: "Sheer fascination . . . semantography is such an important creative advance in language design."

Prof. Lancelot Hogben: "Fascinating . . . stimulating . . . ingenious."

Prof. V. A. Bailey: "Deserves every encouragement by private and public means . . . would be of great value to scientists."

Principal Librarian John Metcalfe: "Bliss' books should be available in the larger public and university reference libraries throughout the world."

Other scholars expressed similar views.

THIS WORK LED TO UNBELIEVABLE DISCOVERIES

This work is more than a symbol writing, more than a simple logic and semantics. The quest for meaning in words of all languages, and for their symbolization, led to unexpected results, and unbelievable discoveries.

As it is with all new ideas, they are contrary to the old ideas, and difficult to believe. Even the testimony of great scholars, who agreed with the author's findings, could not overthrow orthodox theories and teachings, in spite of the newly-found evidence.

You, dear reader, are invited to study this evidence, and to realize its importance, and the hope it holds for the future of the human race. The following paragraphs are an introduction to the chapters in this book dealing with these discoveries.

In the quest for basic symbolization of meanings, the author studied the writings of all civilisations, beginning with the oldest writings on the walls of Babylon and Nineveh, Memphis and Athens, ancient and modern Rome, down to the writing on the wall boards of our newspaper offices.

He found that men of all civilisations had one overpowering item to report and record in stone and parchment, in bronze and newsprint: **VIOLENCE AND WAR**. Since writing was invented about 7,000 years ago, men got not tired to brag about their "victories" of killing their fellowmen, be they of another tribe, another religion, another language, another nation, and even of the same nation.

What induced them to commit these horrible crimes? asked the author. The answer is: **WORDS**. Words spoken by the kings, the high priests, the leaders. Words, which made (and still make) men believe, that when they cover themselves with the mortal blood of their fellowmen, they cover themselves with immortal honours.

What are the words which can justify every crime in peace and war? The author found that these words are most difficult to symbolize. They are abstract meanings. They cannot be pictured. They induce different "pictures" in different minds.

Here was the ultimate test for the author. Either he could find satisfactory symbols, which are so logical, that they could show everyone the insane illogic of strife and war, and the lies of the leaders of men, or he must abandon all hope of ever finding a new writing which is better than all the writings and languages ever invented by man.

A man came to his rescue, one of the greatest psychiatrists of our age, and the first director general of the World Health Organisation, Dr. Brock Chisholm. He said that war is due to a mental perversion caused by words.

Chisholm accused the mental and moral leaders of mankind that they are using deliberately these abstract words to foster their own craving for power, and plunder, and plush positions.

Chisholm's accusations caused a furore. But he could not offer any medical psychological treatment for making these abstract meanings harm-

less, nor could he offer any archeological proof that war is due to the emergence of abstract language. His enemies countered that war is innate in human nature.

The author found the archeological proof for Chisholm's theory in the caves of old stoneage man (30,000 to 50,000 B.C.). And the logic of his symbols offer the psychological treatment for making abstract and dangerous meanings harmless, and thus reverse the catastrophic perversion of the minds of men.

This incredible statement holds some breath-taking promise and hope. The archeological and biological proof has been found that human warfare is not innate in human nature, and that war can be gradually abolished, once we start teaching children how to deal with abstract meanings which cause miseries and massacres. It's simple with these symbols. Children can learn quickly how to avoid the miseries caused by their verbal warfare with abusive words.

The author's findings have been acknowledged by eminent scholars. Every layman can see the evidence, but it is not easy to become convinced, because we must unlearn what we have learned, heard and believed, namely, that war was, is, and ever shall be with the human race. It's simply not true. War is a recent mental epidemic. It started about 15,000 B.C. with the invention of abstract words.

But this was only the beginning of new discoveries. The author asked himself: How did language emerge with primeval man? How did man emerge from the animals? What are the main differences between the cries of animals and the words of men? How did the higher animals evolve? How did life evolve? What is MAN? What is NATURE? What is LIFE?

Take a golf ball and an egg. Both look similar, both contain atoms. But keep both warm for a few weeks, and something incredible happens within the egg. By some mysterious magic, the atoms of the egg build a perfect aeroplane with the most amazing apparatuses.

The conclusion is: living atoms THINK. They know what they are doing, and they do it better than the best human engineer. But the thinking of living atoms contains two factors which are rarely found in the thinking of living men. Living atoms **CO-OPERATE with each other** when they build their aeroplane. And they **HELP each other** when their aeroplane gets wounded and damaged. They rebuild the broken bone, the broken muscle, the broken skin, until all is well again in their community.

These facts have a tremendous bearing on the new logic of our symbols. Because the living atoms which form our brain keep us alive by the **CO-OPERATION AND HELP** of all cells of our body. **Only words pervert our thinking.** And there is no school anywhere which teaches how to make the brain perversion by words harmless. The result is miseries and massacres on an ever growing scale.

Continue reading the reprint of an article which the author wrote in 1964 for a scientific journal. It contains

A SUMMARY OF THE AUTHOR'S THOUGHTS AND FINDINGS

It begins on page 52 of this book.

QUICK INFORMATION FROM THE SEMANTOGRAPHY SERIES

After the publication of the 3 volumes on semantography in 1949, thousands of letters and informative papers were sent out to scholars and libraries. The Library of Congress in Washington D.C. and other university libraries gave standing orders for all forthcoming publications on semantography.

This started the semantography series, the collection of leaflets, pamphlets, brochures and books, the texts of lectures and articles in newspapers and journals, monographs, courses, controversies, etc. As the years went by, the author gave the series the significant subtitle

THE STORY OF THE STRUGGLE FOR SEMANTOGRAPHY

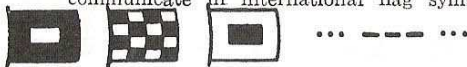
The catalog list of over 200 issues is reprinted on page 797

List of the issues reprinted in the following pages

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1	First leaflet and book cover	16
6	The history of this idea, and what scientists think of semantography	20
8	Bertrand Russell's letter and opinion	34
15	Leaflet on a children's primer for the general conference of Unesco 1951	36
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62	Article on semantography by W. A. Heaney for the magazine of the New England University College, Armidale	40
52	2 pages of the pamphlet for Professor O. L. Reiser's lecture to the American Association for the Advancement of Science, Philadelphia 1951	46
157	Informative leaflet for librarians	48
188	The language riots in India, and first page of the article "India and Semantography" in Darshana magazine.	50
240	A summary of the author's thoughts and findings, as reprint of an article in Darshana magazine, India, 1964	52

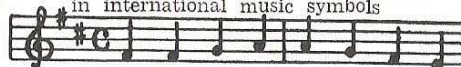
HOWEVER, the above mentioned issues, with the only exception of the last issue, deal with one aspect only: symbols for bridging all languages. The other 4 aspects, as listed on page 52 are simply "unbelievable," and the author found that the first aspect alone was sufficient to label him a "crank", a distinction earned by almost all pioneers of new ideas.

Ships of all Nations at Sea
communicate in international flag symbols



I understand you s o s

Beethoven, 9th Symphony
in international music symbols



All man-kind unites fra - ter - nal

100 SYMBOL ELEMENTS TO OVERCOME BABEL in reading, writing & thought

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a>b
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/
\$ £
?!
A=V/n

2 ✕✕

two wars
(symbol of
crossed swords)

deux guerres

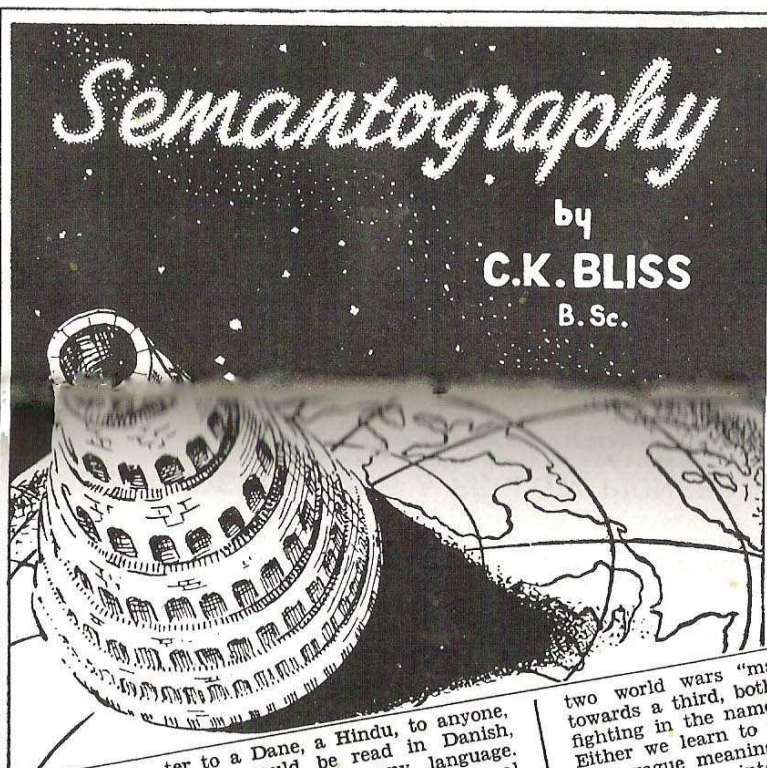
dos guerras

Δύο Πόλεμοι

\$ £

?!
兩戰

A=V/n
दो संग्रह



人 →

man progresses

l'homme
progresses

el hombre
adelanta

Ἄνθρωπος
Προοδύει

人類進步

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SYDNEY, 14th April, 1949.—After seven years of work, Mr. C. K. Bliss, B.Sc., a research chemist, believes to have realized the idea, conceived 300 years ago by the great mathematician Leibnitz, and attempted by Bishop Wilkins—a symbol writing. Working under the impression that the present age of confusion and word-charlatany resembles somewhat the confusion of the alchemist age, he analysed language, and separated the elements of meaning. Each got a simple, almost self-explanatory symbol (see the above examples: two wars; man progresses).

The first practical application may well be sensational. With an adjusted typewriter of ordinary size (which carries the alphabet too) or by hand, you could write a let-

ter to a Dane, a Hindu, to Danish, and it could be read in Danish, Hindustani, or in any language. We use already many international symbols in daily mathematics, industry, science, technology, music, commerce, traffic, writing, signals, etc (see above examples). Now we have simple symbols to cover the whole range of language for such practical purposes.

The second practical application of semantography (semantics-significant meaning) may be even more sensational. After a few months' training, you could point out in any speech or ordinary writing (a business agreement, for instance) the vague words which may cause arguments. Take the word "progressive" used by any party (or person) from left to right. After

two world wars "man progresses" towards a third, both sides already fighting in the name of "Progress." Either we learn to recognize words with vague meanings and learn to translate them into concrete ones, or we will perish through our own muddled way of speech and thought.

The third practical application: three-quarters of the world's population cannot read and write. There are about 3,000 languages, over 2,000 without a phonetic alphabet. (even learning of foreign languages (even compulsory, and including Esperanto) has mostly proved a failure. Here is a simple "picture language" for reading and writing in all languages. Here is one primer for one world.

The 4th practical application may

Founder and Director:
C. K. BLISS

INSTITUTE FOR SEMANTOGRAPHY

A Non-Profit Educational Research Organisation
5 Maroubra Bay Rd., Pagewood, Sydney, N.S.W. Australia.

2 Vicar St., Coogee, Sydney, Australia

WE ARE IN THE ALARMING POSITION

of having enormous control over the forces of Nature, and very little reasoning power to guide our actions—in fact, very much like a lot of children playing with loaded guns. Man, it appears, is still handicapped by his . . . muddled way of thinking. May it not be that much of this unreasonable muddle is due to the simple fact that our symbols for thought—language—are not yet set in order; that in the matter of thought-symbolism we are still much in the same state of confusion as the Romans were in their arithmetic? We should be horrified at the difficulty of multiplying MDCCIX by LVII; to the educated Roman it seemed natural and inevitable, but his arithmetical powers suffered in consequence.”

The Physicist, Prof. Sir Richard Paget (3).

UNESCO MUST SEEK

to discover what are the various barriers to free, easy and undistorted dissemination of news and knowledge between nations, and (must) see that they are lowered or, if possible, removed. And the study of language, notably of semantics, as its scientific basis, is a necessary step towards improving language as a tool of description and communication, and safeguarding ourselves against promoting misunderstanding instead of understanding.”

The Biologist, Prof. Julian Huxley (66)

IDEOGRAPHIC WRITING

will surely achieve the final victory over phonetic writing.”

The Linguist, Prof. Basl Hall Chamberlain (9)

TO YOU

WHATEVER AND WHEREVER YOU MAY BE,

goes the invitation to join in this fascinating PIONEER work.

EVERY NEW IDEA,

a car without horses, a ship without sails, a machine which flies, a box which talks, speaking over a wire, singing over the air—and now a writing which can be read in any language, and which can clear up confusion of meaning—every new idea was first recognized and worked out by PIONEERS, who were amateurs, because there are at first no professionals in new fields of human endeavour.

“A CRACKPOT IDEA,

that's what it is,” said the people. But this did not deter the PIONEERS. They cheerfully braved ridicule, because they knew that every new idea is first considered a crackpot idea. When you have read this book, you will know that the idea is workable.

START A CORRESPONDENCE WITH A FELLOW PIONEER

in a far-away country. Do it for any purpose you like, for the exchange of stamps, photos or views on technical, medical, educational matters, for the furtherance of this idea, for the collection of data for a general or special dictionary or a primer (on semantography and your mother tongue), or do it just for the promotion of friendship and goodwill, or just for the fun of it (to write in English a symbol letter, which your friend can read in Danish); whether you are a boy scout or girl guide, or already a grown-up, but still young enough to plunge into a thrilling adventure and an absorbing hobby.

THIS IS A NEW MEDIUM FOR TRADE AND COMMERCE

It's even a kind of shorthand. Long word clusters are expressed by a few symbols so vividly, that even the small traders in Asia and Africa could soon read them on notes, invoices, cases and merchandise. The symbol for “ship” looks like a ship; a car, a box, bags, drums, tins, etc., are expressed by their outlines. You too, can pioneer this new world-embracing “picture language” in your place of work. The typewriter is the ordinary one; only the capital letters are replaced by geometrical lines. Cables in semantography (sent as radio picturegrams) don't need to be coded, decoded and translated.

WRITE TO THE PUBLISHER IN YOUR COUNTRY

for books, primers, dictionaries, typewriters, stencils, exercise books, courses, etc., or directly to the INSTITUTE FOR SEMANTOGRAPHY (IFS), which deals with all these problems and all the IFS, at ~~8 Macoubra Bay Road, Pagewood~~, Sydney, N.S.W., Australia. 2 Vicar St., Coogee, Sydney, Australia

ORGANISE A BRANCH OF THE SOCIETY OF SEMANTOGRAPHY (SOS)

in your school, university, circle, club, office, workshop, factory, village, town or country. Become its first secretary, or teacher, or executive.

ALL THIS IS STILL TERRA INCOGNITA.

Only a few scientists have so far penetrated into “the thick jungle of meaning” in naturally grown languages. Other scientists have shown that unambiguous symbols in mathematics, chemistry, music and other human activities, can bridge all languages, can bring agreement, co-operation and success.

THE THIRD WORLD WAR

—if we don't prevent it—will be an “ideo-logical” war. We will kill each other, because of a difference of opinion, which we often express with the same words, meaning different things. Bombs will fall, because of confused ideas in confused minds, expressed in confused language. “War begins in the minds of men.”

HERE IS YOUR CHANCE,

wherever you may be, in a thronged city or a lone cabin, to contribute to a new idea, to absorb yourself in a new hobby, which will give you satisfaction and advantages. It will make you understand the working of language, it will make you acquainted with the intricacies (and fallacies) of your own language, it will make you immune against all those words and phrases, which are fired from all sides (including people around you) with intent to hurt or to confuse, it will give you the system and the logic to silence big-mouthed debaters, who cover their ignorance by throwing around long words—it will lift you up and above the humdrum of daily life, and **IT WILL MAKE YOU A PIONEER.**

THE INSTITUTE FOR SEMANTOGRAPHY

A Non-Profit Institution for the Promotion of Semantics and Semantography

Great Britain:
~~P.O. Box~~
 London, W.C.2

Australia:
~~5 Maroubra Bay Road,~~
~~Pagewood, Sydney, N.S.W.~~
 2 Vicar Str., Coogee, Sydney, Australia

United States:
 P.O. Box 167
 Yellow Springs, Ohio

SEMANTOGRAPHY SERIES
 Leaflet No. 6

JULY, 1950

*What Scientists think
 of
 C. K. Bliss'
 Semantography*

100 Symbol Elements to overcome
 Babel in Reading, Writing, and
 Thought

Published 1949
 by the Institute for Semantography.

together with

Historical Data and Quotations

about a

Curiosum in Science and Bibliography

For nearly 300 years

no original work was written and published as an attempt to realise an idea suggested by the great mathematician and philosopher G. W. LEIBNIZ (1646-1715), the inventor of the infinitesimal calculus.

Indirectly, his idea led to the adoption of international symbols in science, but what Leibniz imagined was a Symbolis of Thought, a Picto-Ideography, a Symbol Writing, which (like the mathematical symbols $1 + 2 = 3$) could be read in all languages, yet be so simple that even peasants should understand it.

He prophesied: "I think these thoughts will some day be carried out . . ."

Now after nearly 300 years— (Please turn over)

HISTORICAL DATA and QUOTATIONS



Year

1661 George Dalgarno,

a school teacher, published his ARS SIGNORUM or UNIVERSAL CHARACTER.

1668 John Wilkins

Bishop of Chester, Co-founder of the Royal Society, published his ESSAY TOWARDS A REAL CHARACTER.

Unfortunately, Dalgarno's and Wilkins' symbols consisted of arbitrary lines, with no resemblance in outline to the things they should represent. "Dalgarno's system shows the complete lack of a practical basis, it is purely artificial . . . yet it had the merit of being the first concrete contribution to a problem which was so early recognised." (H. Jacobs).

1679 Gottfried Wilhelm Leibniz,

Mathematician and philosopher, declined Dalgarno's and Wilkins' system. He thought of symbols, which should outline the real things, very simple. "very popular." He said in his NEW ESSAYS CONCERNING HUMAN UNDERSTANDING (translated by A. G. Langley, MacMillan New York 1896):

"A Universal Characteristic, very popular . . . might be introduced if small figures were employed in the place of words, which would represent visible things by their lines and the invisible, by the visible, which accompany them."

"This true method of a Universal Symbolism would . . . guide the mind as do the lines drawn in geometry, and the formulas in arithmetic . . .

"This would be of service at first for easy communication with distant nations; but if introduced also among us, **without however, renouncing ordinary writing** . . . would be useful in **giving thoughts less surd and verbal than we now have** . . . This figured character . . . would be very agreeable to the people, just as in fact the peasants already have certain almanacs . . ."

"I think these thoughts will some day be carried out, so agreeable and natural appears to me this writing . . . for rendering our conceptions more real."

Leibniz realised the semantic effect of such an international picto-ideography. But he made no attempt to draw up such symbols, and later scientists completely disregarded his advice. They evolved arbitrary systems, based wholly on numerical classification, which would have made it necessary to memorise a vast catalogue of notions.

1873 Melvil Dewey,

Librarian, late President of the Association of American Librarians, evolved the only practical system of this kind in the limited field of numerical library classification, now in use in most libraries throughout the world.

However, with regard to Leibniz' idea, a Symbol Writing, covering the whole range of language, nothing was done.

1904 Professor Basil Hall Chamberlain,

Educator and Linguist, Author of books on East Asia, wrote:

"Ideographic writing apparently possesses some inherent strength that makes it tend to triumph over (without entirely supplanting) phonetic writing, whenever the two are brought into competition in the same area.

All the countries under Chinese influence exemplify this little known fact in a striking manner.

In Europe such competition has scarcely taken place, except in the case of the symbols for the numbers and a few other ideas; but there too the general law has asserted itself.

Which is the simpler, the more graphic, the more commonly used: 'three hundred and sixty five' or '365'?

Ideographic writing will surely achieve the final victory over phonetic writing."

Three Centuries passed by

the most momentous in the advancement of knowledge by the human race, but Leibniz' idea remained forgotten, and in the year

1922 Professors C. K. Ogden and I. A. Richards,

University of Cambridge, wrote in **THE MEANING OF MEANING** (Kegan, Paul, Trench, Trubner & Co., London):

"This speculative construction, which first occupied his attention at the age of 18, and was constantly in his thoughts, especially about the year 1679, and when it became clear that he would not have the strength to proceed with it, **still remains where Leibniz thus left it.**"

After World War I.

A "War of Words" started. Nationalist, Socialist, National-Socialist, Fascist, Communist, (now even) National-Communist, and other ideologies, were presented in vague, ambiguous, relative words to people, who have learned to read, but not yet learned to recognise fallacious meanings, which could mean different things to different people. Ministries of Propaganda were set up and the slogans prepared for new wars.

Learned men realised the danger and at some Universities, the study of meaning—Semantics—was taken up.

1930 Sir Richard Paget,

Fellow of the Physical Society, and of the Institute of Physics, London, warned in BABEL (Kegan, Paul, Trench, Trubner & Co., London):

"WE ARE IN THE ALARMING POSITION of having enormous control over the forces of nature, and very little reasoning power to guide our actions—in fact, very much like a lot of children playing with loaded guns. Man, it appears, is still handicapped by his . . . muddled way of thinking. May it not be that much of this unreasonable muddle is due to the simple fact that our symbols for thought—language—are not yet set in order; that in the matter of thought symbolism we are still much in the same state of confusion as the Romans were in their arithmetic? We should be horrified at the difficulty of multiplying MDCCIX by LVII; to the educated Roman it seemed natural and inevitable, but his arithmetical powers suffered in consequence."

"Human thought requires an efficient method of symbolism such as no language yet supplies. If the keepers of our language maintain a die-hard attitude and succeed in preventing reasoned improvement the result will, I suggest, be that language will be less and less used for intellectual and rational purposes and relegated to an altogether inferior status as the symbolis of sentiment and small talk. All accurate thinking will have to be carried out by means of some other symbolism like that of mathematics."

"This idea is also not new . . . Leibniz realised the need of a reformed symbolism and method of thought. He imagined a universal symbolism of thought which would be understood by all nations, and by which thought itself would become accurate and quantitative."

1941 Dr. Frederick Bodmer and Professor Lancelot Hogben

(See quotation page 10) wrote in THE LOOM OF LANGUAGE (publ. 1944 by George Allen and Unwin, London):

"The efforts of Dalgarno, Wilkins or Leibniz were not fruitless . . . revision of chemical terminology realised Wilkin's dream of a real character. Modern chemistry has a vocabulary of ideographic and pictographic symbols . . ."

1942 Charles K. Bliss,

B.Sc., an industrial research chemist and science lecturer, with a lifelong training in the handling of chemical symbols, found himself marooned in China, and then in the hands of the Japanese.

He was impressed by the unique quality of Chinese picto-ideography (although complicated and cumbersome) which made it possible that a newspaper printed in Shanghai could be read in the different languages of China and East Asia, and even in English, French, etc.

He remembered his linguistic troubles in scientific library research, and, realising the havoc wreaked by war-making slogans, he set to work to analyse language and to separate the "elements of meaning," then to draw up simple pictographs, typable on an adjusted typewriter of ordinary size, (which carries the small letters of the alphabet too).

After the war, he worked for another 4 years on this idea, put it on a sound scientific basis, simplified his symbols until they became almost self-explanatory, and wrote his book.

After World War II.

Many scientists realised that it is their responsibility to create a world of peace. "Since war begins in the minds of men, it is in the minds of men that the defences of peace must be constructed" reads the preamble to UNESCO's Constitution. And an old-new idea began to take new shape, **Scientific Humanism.**

1946 Professor Oliver L. Reiser,

University of Pittsburg, Pennsylvania, Chairman of the International Committee on Scientific Humanism, Author of PHILOSOPHY AND THE CONCEPTS OF MODERN SCIENCE, THE PROMISE OF SCIENTIFIC HUMANISM, A NEW EARTH AND A NEW HUMANITY, wrote in THE WORLD SENSORIUM, (Avalon Press, New York):

"The central difficulty with Humanism has been that it has tried to put an immensely simple message into WORDS, whereas such a message can only be written into a form of a universal picture language.

The job is to find a layout, a picture basis, so simple and so huge that it is usable by anyone who has mastered the movies or can punch a radio panel."

1949 SEMANTOGRAPHY, 100 Symbol Elements to overcome Babel in Reading, Writing and Thought,

was completed by C. K. Bliss after seven years of work and published by the Institute for Semantography.

WHAT IS SEMANTOGRAPHY?

SEMANTOGRAPHY constitutes the first practical realisation of the Dream of Leibniz, the Demand of Paget, the Description of Reiser. It comprises:

AN UNUSUAL, NEW TOOL FOR LANGUAGE LEARNING

Our minds resist—even under compulsion by parents and teachers—the learning of foreign languages (and this includes Esperanto). We learn French for seven years and many of us can't ask correctly for a glass of water. The people of this planet stick to their many and varied mother tongues, even in the United States of America.

Some of the reasons are the different word order, grammar, sentence construction, idiomatic expressions and nonsensical use of the particles (which make "up" nearly 30 per cent of all the words we use) in the many languages. The idiomatic expression "to make up one's mind" seems utterly nonsensical in most foreign languages, unless it refers to "plastic brain surgery." But for the word "to decide" there is a simple counterpart in most languages.

Semantography applies a few simple and universal laws of Physics, Chemistry, Biology and Psychology and we arrive therefore at a common basis for all languages, which are anyway used to describe the same physical world around us.

Consequently, Semantography represents a new tool for language learning and language planning. It enables us to acquire in the shortest way a basic stock of any foreign language. It makes us realise the unpicturable nonsense in the expressions, rules and exceptions of our own and any other mother-tongue. By applying the "natural sciences" to our utterances, we learn to talk sense.

Still there are the differently pronounced words for the same thing in the many languages. We don't like to memorise strange vocables, but we take easily to international symbols like $1 + 2 = 3$, &, §, £, %, because we can read and pronounce them in our own familiar mother-tongue.

And this leads to a fascinating and fantastic advantage of Semantography, namely:

ONE WRITING FOR ONE WORLD

A letter, a notice, a warning, a paper written, typed or printed in the simple, almost self-explanatory picturegraphs of Semantography can be read in any language. This has immediate practical applications in countries with a multilingual population and/or international traffic. Furthermore it represents a new auxiliary inter-linguistic medium for correspondence and reference literature in Science, Industry, Commerce, Communication, Education, etc.

LITERACY FOR THE BILLION

Scientists have found in Africa that natives, engulfed in superstitions, will not take to any improvement in agriculture, hygiene, etc., without the stimulus of literacy.

Here is a simple universal "Picture Writing" for more than 1,500,000,000 illiterates in Asia, Africa and elsewhere, speaking in thousands of languages and dialects.

Here is ONE PRIMER, ONE PAPER, ONE PRINT FOR ONE WORLD. "With the Art of Writing," said Thomas CARLYLE, "the true reign of miracles for Mankind commenced . . . Democracy is inevitable."

A SIMPLE SEMANTICS FOR THE CITIZEN, A LOGIC FOR THE PEOPLE

The most desperately needed items of Education are not taught in the primary schools and secondary schools of the world: "how to think logically" and "how to recognise vague, ambiguous and fallacious words," which threaten and often wreck the family, the nation, the whole world.

A simple symbolic logic and semantics can be taught by way of the symbols. Vague, ambiguous and disputable meanings become directly visible as such. A generation steeped in Semantography may stop nagging and bickering or being misled by hate propaganda.

THE PLANETARY MEDIUM FOR SCIENTIFIC HUMANISM

The symbols work like chemical symbols. They reveal something of the inherent structure (and danger) of a meaning. The simple mind symbols work like variables in propositional functions. Even laws of Ethics, written in the symbols, can be arrived at by a similar treatment to that for scientific formulas—yes, even peasants would understand it, as Leibniz wanted it, peasants of any country and any language.

WHAT SCIENTISTS THINK OF SEMANTOGRAPHY

So far, the following scientists have had an opportunity of acquainting themselves with this new scientific discipline.

BERTRAND RUSSELL, O.M.

Eminent Philosopher, Mathematician, Logician, etc. Bearer of many academic distinctions. Author of numerous books among which are THE PRINCIPLES OF MATHEMATICS, PRINCIPIA MATHEMATICA (co-author with A. Whitehead), AN INTRODUCTION TO MATHEMATICAL PHILOSOPHY, THE PHILOSOPHY OF LEIBNIZ, THE A.B.C. OF ATOMS, THE A.B.C. OF RELATIVITY, THE ANALYSIS OF MATTER, AN OUTLINE OF PHILOSOPHY, EDUCATION AND THE SOCIAL ORDER, HISTORY OF WESTERN PHILOSOPHY, etc. etc. wrote:

Dear Mr. Bliss,

I have been looking through your system of Semantography and I think very highly of it. The logical analysis is good. The symbols are ingenious and easy to understand, and the whole is capable of being very useful. Any man or men who will spend the money necessary to get your work printed will, in my opinion, be performing an important service to mankind.

Your Sincerely

Bertrand Russell

P.S. You are at liberty to make any use you choose of this letter.

PROFESSOR LANCELOT HOGBEN,

F.R.S., M.A., D.Sc., Prof. of Medical Statistics, University of Birmingham, etc.

Author of MATHEMATICS FOR THE MILLION, SCIENCE FOR THE CITIZEN NATURE AND NURTURE, INTERGLOSSA, etc. Editor of THE LOOM OF LANGUAGE (by Dr. Frederick Bodmer). Author (with Marie Neurath) of FROM CAVE PAINTING TO COMIC STRIP and other books.

Prof. Hogben, in a letter, calls the book on SEMANTOGRAPHY "**fascinating**," and writes:

" . . . I think the views of Mr. Bliss are stimulating, ingenious, and worthy of a wide public among interlinguists . . . "

And in another letter:

"I have found the project of Mr. Bliss interesting and stimulating, well worthy of encouragement as a possible aid to education of preliterate communities and likely to promote further study of a much neglected problem of world unity."

PROFESSOR CARLETON WASHBURNE,

B.A., Dr. Engineering, Professor of Education, Brooklyn College, New York; UNESCO Education Reconstruction Specialist, formerly Director of Education in Italy, U.S. Army, 1945, World President New Education Fellowship, etc.

Author of A LIVING PHILOSOPHY OF EDUCATION, NEW SCHOOLS IN THE OLD WORLD, ADJUSTING THE SCHOOL TO THE CHILD, THE RIGHT BOOK FOR THE RIGHT CHILD, REMAKERS

OF MANKIND, LOUISIANA LOOKS AT ITS SCHOOLS, THE STORY OF THE EARTH (co-author with his wife Heluiz Chandler Washburne) and many other publications, writes:

"A brief examination of the "100 Symbol Elements" idea of Mr. C. K. Bliss, shows it to be ingenious.

I believe it should be subjected to controlled experimentation to demonstrate whether or not it is practicable. If it proves practicable it could be of great value."

PROFESSOR HENRY L. BROSE,

D.Phil., M.A., (Oxford), D.Sc. (Adelaide), F.Inst.P. (London) formerly Professor of Physics, University of Nottingham. Author of THE THEORY OF RELATIVITY, etc. Translator of works by Albert Einstein, Max Planck, and others, writes:

"It has given me great pleasure to read the three volumes on Semantography by Mr. C. K. Bliss, B.Sc. In my opinion Mr. Bliss has evolved a new system of pictorial ideography, which should be useful in many different spheres. For example, it can be applied in our ordinary daily lives in scientific communication, commerce and as an international script. It is easy to see that the possibilities of the scheme are not exhausted by the many ingenious suggestions sketched in Mr. Bliss' volumes.

By this method the root meaning of words come into evidence in a manner, reminiscent of a type of mental algebra and of a system of symbols akin to those used in chemistry.

I feel that these ideas should be of wide application in the future when nations will need to be drawn more closely together by just such ways as are here outlined by Mr. Bliss."

JOHN METCALFE,

B.A., F.L.A., Principal Librarian and Secretary of the Public Library of New South Wales, Australia, Honorary General Secretary of the Library Association of Australia, Author of numerous Publications on Library Problems and Practice, writes:

"I have known of the work by Mr. Bliss on what he now calls Semantography for the past four years. The field in which he has been working was not one unfamiliar to me, because I had been interested in and had written and published articles on Basic English.

Mr. Bliss has now published an extensive work, setting out his system and I believe that it should be studied by those interested in any way in semantics and in the problems of international language. Even if nothing comes of his particular system and in his life-time, **I believe his book should be available in the larger public and university reference libraries throughout the world.** I have therefore no hesitation in recommending its purchase by these libraries. Having regard to the size of the book and the present cost of production, I do not consider the price of approximately £A5 to be excessive."

JAMES HEMMING,

Research Officer of the Association for Education in Citizenship, England: Member of the National Institute of Industrial Psychology, the Tavistock Institute of Human Relations, Author of DEMOCRACY IN SCHOOL LIFE, TEACH THEM TO LIVE, THE CHILD IS RIGHT (co-author), etc. writes:

"The world is now one, technologically and economically speaking. There is, thus, an urgent need

to develop a language-free means of conveying ideas **universally** as, in limited fields, has already been achieved by musical notations and by the international symbols used in mathematics, electronics, etc.

Your system is designed precisely to achieve this and warrants an extensive trial with children, with adults, with persons of different nationalities and with individuals of varying intelligence. If the system stands up to this test—and I see no reason why it should not—then obviously, this particular method of jumping the language barrier between peoples **should be developed as rapidly and as widely as possible.**”

B. BURGOYNE CHAPMAN,

M.A. (Sydney, Cambridge, Columbia), formerly Fraser Graduate Scholar in History (Sydney), Fellow Teachers' College Columbia University, Fellow Royal Geographical Society, formerly Principal Central China Teachers' College, and General Secretary Central China Christian Education Association, etc., writes:

“Thank you for letting me see your proposed international sign language, from which, for the first few minutes, I confess, I was inclined to flee. But investigation showed me the excellence of the idea and I was increasingly surprised at what could be expressed by so few symbols and how easily they could be learnt.

I have often written Chinese characters (a similar sign language, but unduly complicated and numerous) to “talk” with Cantonese and Japanese who read them in utterly different words, and yet we have got on happily and quickly.

Your disinterestedness personally, and sole desire to serve humane and cultural causes makes me feel that almost **your sole difficulty will be to induce busy and conservative people (like myself yesterday) to take the first ten minutes, seriously to begin to study the proposal. After that, its interest and advantages should be clear to intelligent people.**

As a fellow Cambridgeman with Ogden, I know that his Basic English (which attacks quite a different and more limited problem) was at first laughed to scorn."

F. D. McCARTHY

Dip. Anthr. (Sydney), Curator of Anthropology, Australian Museum, Sydney, Author of AUSTRALIAN ABORIGINAL DECORATIVE ART, STONE IMPLEMENTS OF AUSTRALIA, and numerous papers, said:

"Such a simple "language" of symbols will help tremendously to overcome the very difficult problem of disseminating information to peoples of diverse languages, either in one country, such as New Guinea, or in different countries in many parts of the world."

THE SOCIETY OF AUSTRALIAN INVENTORS

(Patron Prof. M. L. OLIPHANT, F.R.S., (President Prof. H. L. BROSE) authorised the Honorary Secretary Mr. A. R. Bamber to write:

"On the 22nd September, 1949, Mr. C. K. Bliss gave a lecture on Semantography to members of the Society of Australian Inventors. Great interest was shown in the demonstration and it was felt that the symbols used in the conveyance of thought are very ingenious, and are worthy of serious consideration by the various responsible authorities. If its practicability

can be proved, especially with children, then its value indeed would be great."

THE AUSTRALIAN SCHOOL OF PACIFIC ADMINISTRATION,

Sydney. After a demonstration before a group of teachers, the registrar, Mr. Wilfred S. ARTHUR, wrote:

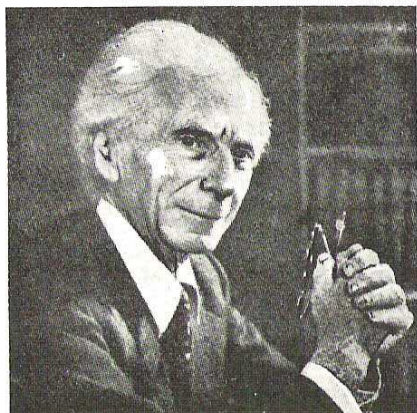
"We feel that a system of ideogrammic writing would have uses for such things as public notices, and that it could be used among peoples speaking a variety of vernaculars."

THE NATIONAL ROADS AND MOTORISTS' ASSOCIATION

of New South Wales, Australia. The executive body after a study of the Semantography symbols for international traffic, authorised the General Secretary, Mr. H. E. RICHARDS, to write:

" . . . I would advise that this Association is of the opinion that the adoption of your system of symbol writing throughout the world would contribute towards much safer traffic conditions in international motoring . . . "

For further testimonials see the next leaflets.



EARL RUSSELL

Bertrand Russell visited Australia in 1950 on a lecture tour and met in Sydney the inventor and author of Semantography, C. K. Bliss, an industrial research chemist, who has applied the Semantics and Logic of chemical Symbolism to the whole range of language, including scientific communication.

Russell tested it, then examined the 3 volumes on SEMANTOGRAPHY, a work which Bliss (a production man, and unwilling to canvass a vast and financially unpromising manuscript) had handtyped (over 500,000 words), drawn (over 10,000 drawings) and handprinted (over 700 pages) himself. Russell then wrote the letter shown here:

Dear Mr. Bliss,

I have been looking through your system of Semantography and I think very highly of it. The logical analysis is good. The symbols are ingenious and easy to understand, and the whole is capable of being very useful. Any man or men who will spend the money necessary to get your work printed will, in my opinion, be performing an important service to mankind.

Yours sincerely,

BERTRAND RUSSELL.

P.S.—You are at liberty to make any use you choose of this letter.

Here is a small gift for your library.

A facsimile of the handwriting of one of the greatest Scholars of our Century

BERTRAND RUSSELL

the eminent Philosopher, Mathematician and Logician, Bearer of many academic Distinctions, Order of Merit, Nobel Prize 1950, Author of many Books, foremost Authority on the work of Leibnitz, and on logical Symbolism. Here is his judgment of

SEMANTOGRAPHY

the first practical realisation of Leibnitz's 300 years old speculation and prophecy of a simple "Symbolis Universalis", a Symbol Writing, which could be read and understood in all languages, and which would contain also a simple Semantics and Logic.

TELEPHONE BW 6521



CABLES: USHERHOTEL SYDNEY

Usher's Hotel Sydney

July 7, 1950

I have been looking through your system of Semantography and I think very highly of it. The logical analysis is good. The symbols are ingenious & easy to understand, & the whole is capable of being very useful. Any man or men who will spend the money necessary to get your work printed will, in my opinion, be performing an important service to mankind.

Yours sincerely
Bertrand Russell

P.S. You are at liberty to make any use you choose of this letter.

Leaflet No. 8

SEMANTOGRAPHY SERIES

June, 1951

If you are interested to acquire the work, or to get more information about Semantography, write to

THE INSTITUTE OF SEMANTOGRAPHY

A Non-Profit Institution for the Promotion of Semantics and Semantography

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PRAISED BY BERTRAND RUSSELL

PRAISED BY LANCE HOGBEN, CARLETON WASHBURNE, PEGGY VOLKOV, etc.




SIR RICHARD PAGET, PATRICK MEREDITH, JAMES HEMMING, JOHN METCALFE, etc.

BLISS Semantography

for the children of the world
pour les enfants du monde
para los niños del mundo



λ_1	+	λ_2	+	λ_3	+	Δ_3
I	plus	you	and	he	and	she
Moi	et	toi	et	lui	et	elle
Yo	y	tu	y	el	y	ella

$\lambda_1 \Delta_1$			
We	(a letter)	correspond	happily
Nous		correspondons	joyusement
Nos		correspondemos	dichosamente

This is a modern picto-ideography for children, natives, stamp-collectors, business-men, technicians and scientists who don't understand each other's language.

A letter, a primer, a paper, even a poem printed in this "Writing for One World" can be understood in all language.

A SIMPLE SEMANTICS AND LOGIC FOR THE PEOPLE

This is the Title Page of a Children's Primer prepared for printing by the Inventor of Semantography, Mr. C. K. Bliss

THE MEDIUM OF UNESCO

the truly Universal Script for the illiterate Peoples of the World.

Now that the Experts of Unesco Paris have studied it, the General Conference may agree that all Unesco Commissions of all Member Nations shall be provided with one complete set of the 3 volumes on SEMANTOGRAPHY by C. K. Bliss, in order to acquaint themselves with this new universal medium, and decide about it later on.

Obtainable from THE INSTITUTE FOR SEMANTOGRAPHY, 6 Macquarie Bay Road, Penrith, Sydney, N.S.W., Australia 2 Vicar Str., Coogee, Sydney, Australia Leaflet No. 15 MAY, 1951

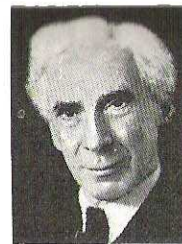
300 YEARS AGO



LEIBNITZ (1646-1715) great Mathematician and Philosopher, speculated about a Picture Writing, very simple, "very popular . . . for easy communication with distant nations, but if introduced also among us, WITHOUT, HOWEVER RENOUNCING ORDINARY WRITING . . . would be useful in giving thoughts less surd and verbal than we now have."

He prophesied, "I think these thoughts will some day be carried out . . ."

AND TODAY



BERTRAND RUSSELL,

eminent Mathematician and Philosopher, foremost Authority on Leibniz and on Logical Symbolism, has studied and tested Semantography. He wrote: "I think very highly of it. The logical analysis is good. The

symbols are ingenious, and easy to understand, and the whole is capable of being very useful."

And he added that people who will materially assist the publicising of Semantography "will, in my opinion, be performing an important service to mankind."

(Picture from THE PHILOSOPHY OF BERTRAND RUSSELL, by kind permission of Prof. P. A. Schilpp, Northwestern University, U.S.A.)

THESE SCIENTISTS

favour and support
SEMANTOGRAPHY

Prof. Washburne (New York), Prof. Lauwerys (London), Prof. Reiser (Pittsburgh), Prof. Hogben (Birmingham), Prof. Meredith (Leeds), Prof. Mitchell, Prof. McDonald, Black (Sydney), Sir Paget Dr. Volkov, Hemming (London), Dr. Wolsky (Delhi), Dr. Brose, Metcalfe, McCarthy, Chapman (Sydney), and others, in fact every scholar who studied it seriously.

Underwood Typewriter Corp.

(Mr. J. A. B. Smith, New York) has agreed to adjust an ordinary typewriter for Semantography. The small letters remain for ordinary writing. The capital letters are replaced by line elements for the

Some Geo-Logical and Geo

1. SCIENTISTS

have found in Africa that natives, engulfed in superstitions, won't take to any improvements, even in agriculture, tools, hygiene, etc.—without the stimulus of literacy.

2. SCHOLARS

agree that the first step towards a democratic World Federation of Governments must be the establishment of Universal Literacy. But,

3. THREE-QUARTERS

of the World's Population is illiterate, and divided by thousands of languages and dialects.

4. PRINTING

different Primers in different languages for different villages, would divide the people even more. This fosters nationalism even in literate countries (e.g. Welsh, Irish and Scottish Gaelic).

5. PROFESSORS

and Primitives, Scholars and School-children anywhere in the world don't like to learn foreign languages, including Esperanto and Basic English. But $1 + 2 = 3$ can be read and understood in all languages.

6. BRIDGING THE LANGUAGE BARRIER

is today a matter of life and death. Half a Century of Esperanto, a quarter of a Century of Basic English haven't brought any application of these international languages in World Communication. Meanwhile, however, the

7. ROAD ENGINEERS

have evolved simple picturegraphs for the deadly Highways of the World. A bent arrow means a CURVE in all languages.

8. RADIO ENGINEERS

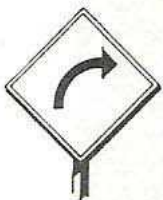
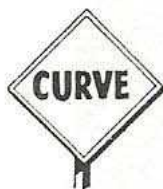
have evolved simple picturegraphs for the intricacies of their world-embracing apparatuses. Native radio mechanics in India, Indonesia, the Philippines and elsewhere, understand these pictographs, no matter what words are used for them.

9. GEOGRAPHERS

and Map Makers, Mathematicians and Astronomers, Chemists, Physicists and other Scientists have their international symbols.

10. GEOLOGISTS

use many symbols on their maps. These symbols are sometimes directional pictographs, sometimes, however, arbitrary for lack of space. Any meaning in geology could be expressed in the picturegraphs of Semantography. These are not arbitrary, but somehow, their outlines indicate the real things. If geologists would agree on a set of such pictographs, typable on the semantographic typewriter (an ordinary-sized adjusted one), and in conformity with the system of Semantography, then GEOLOGISTS WHO DON'T UNDERSTAND A WORD OF EACH OTHER'S LANGUAGE COULD WRITE LETTERS TO EACH OTHER (similarly, doctors, chemists, engineers, etc., etc.). Here are a few samples.



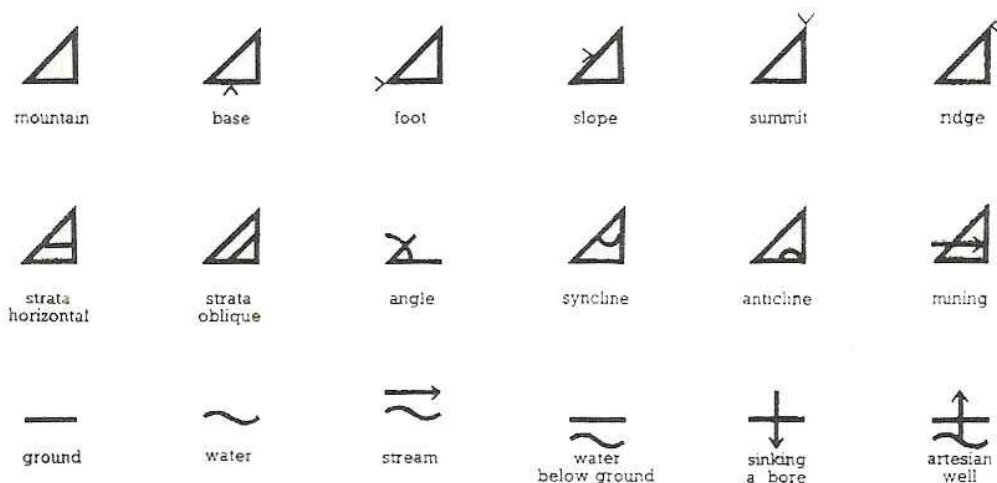
CH₃



-Linguistic World Problems

EXAMPLES OF SEMANTOGRAPHY PICTOGRAPHS

(as typed on the semantographic typewriter)



11. THE BABEL OF SCIENTIFIC PUBLICATIONS

"is a social problem of the first magnitude" (Hogben). The flood of expensive scientific books and journals, which industrious publishers and printers of many countries pour out on poverty-stricken Universities is so great that even the richest Universities cannot afford to buy them all. Besides, of what use are articles in Norwegian, Greek, or Hindustani to scientists who speak other languages.

12. A UNIVERSAL SCIENCE ABSTRACT

without publishers, without printers, and even without money, can be put into operation by a few enthusiastic students in a few Universities (See Bliss's detailed proposals in his paper before the Physical Society of the University of Sydney).

Reports about research in Geology, Chemistry, Medicine, etc., etc., going on at a University could be given half-yearly on small mimeographed filing cards, carrying the title and research result in 100 words—and in pictographs. Reports from Anglo-American Universities would carry the pictographs and the English words beneath; in French Universities it would be French beneath the pictographs, in Danish Universities it would be Danish, etc., etc. Anyone knowing English or French or Danish need not bother about the symbols. Others would learn them in order to read the abstract in their language be it Portuguese or Afrikaans. Soon Universities in small countries would add a line in English beneath the line in their language.

The grammar of Semantography is the "grammar" of the physical event (Agent acts on Object). Putting English or French words beneath the symbols may sometimes result in some awkward English or French sentences, but here at last is a medium to guide a word-for-word translation, free of idiomatic expressions. As an additional advantage this would enable the reader to learn the corresponding scientific or non-scientific words in English or other languages.



13. THE LONDON BOARD OF TRADE

adopted in 1855 a code of flag symbols for British shipping only. Quietly, all other nations adopted it too, without fuss, without conferences, without proposals or counter-proposals.

SEMANTOGRAPHY

THIS is not just another Esperanto, but it is a new system for WRITTEN communication through pictorial symbols, a WRITTEN "language" invented to make international understanding clearer and easier, in fact, to make international understanding really possible; for it is obvious to-day not only that international congresses are sensitive instruments because of language difficulties, but also that even within a group speaking the same language a war of words is carried on between political parties and a desecration of words is organised by journalists; and the consequence is the man-in-the-street suffers a general ignorance and uncertainty about words and language becomes less effective as a means for precise and clear communication.

Mr. C. K. Bliss, a graduate of the University of Technology, Vienna (Austria), now an Australian citizen, the inventor of Semantography, was made to realise how fearful and powerful was Hitler's war of words. Slogans like "Germany above all," and to excuse the atrocities committed in the name of Nazism, "Es war notwendig in einem hoeheren Sinne—it was necessary in a higher sense," vague catchwords, high-sounding phrases of ruthless propaganda mean nothing (in fact, they become ridiculous) when analysed into their scientific significance (Greek *semanticos*) by the pictorial "language" of Semantography; yet they served their purpose.

But even in peacetime the lack of thorough international codes can cause disaster. Witness the ambiguity and diversity of road signs in different countries. The symbol for a railroad crossing in U.S. is very similar in form to the European "No stopping allowed! Drive on!" The symbol "No hooting" in Austria is the opposite of a symbol in South Africa meaning the same thing. The signs for "cross roads," "schools," "curves," are different in most countries of the world. Within one State in Australia you will often find different road signs with the same meaning. What confusion then must the variety cause the foreigner, and what disasters are liable to happen. To overcome these difficulties an international code is necessary that is clear both to the intellectuals and the ignorant, to diplomats and business men, to peasant farmers and illiterate natives. And Mr. Bliss claims (and with ample support of his claim) that he has devised an answer to this need in his Semantography.

The aim of the language is to communicate through simple pictorial symbols the

an article which appeared in the Arts Magazine of the New England University College of Armidale, Australia, written by W. A. HEANEY, who attended Bliss' lectures at the University of Sydney in 1951.

meaning of words BY REPRESENTING PHYSICAL THINGS IN OUTLINE AND NON-PHYSICAL THINGS IN GEOMETRIC SYMBOLS WHICH ANALYSE THEIR SIGNIFICANCE. The language is simple, analytical, pictorial; it is almost grammarless and syntaxless; there are no inflexions to learn; and there are NO INCONSISTENCIES. Almost every symbol suggests its meaning by its outline, so that it is easy to learn the "language," and in understanding the basis on which it works you will find great intellectual delight and satisfaction, for being as closely related to reality and nature as possible, it wastes no words and makes its communication clearly and economically.

The idea of a universal language is not new. An extraordinary uniformity existed under the Roman Empire where Latin penetrated all the known world and retained in the ranks of the officials, Roman and native, an extraordinary uniformity, so that the Latin of an educated Spaniard or African was almost identical with that of a Roman. Latin was used down the Middle Ages as the Ecclesiastical language of the Church, and the official language of scholars. In England, even in the Sixteenth Century, there was a strong tradition that sanctioned the use of Latin in all fields of knowledge for English along with other vernaculars was regarded as a popular language, a vulgar tongue, immature, unpolished, and limited in resources, having no faculty to express the abstract ideas and the range of thought which the ancient language was regarded as being so notably capable of.

As early as 1661 George Dalgarno, in his "Ars Signorum," and Bishop John Wilkins (1668) in his "Essay Towards a Real Character," had attempted new universal symbolic languages, but the arbitrariness of their symbols and the consequent vagueness and complication in their representations leave the attempts interesting curiosities. Gottfried Wilhelm Leibnitz, the German philosopher, saw that Dalgarno's and Wilkins's attempts LACKED CONTACT WITH REALITY, and he said in his "News Essays Concerning Human Understanding": "A universal characteristic very popular... might be introduced if small figures were employed in the place of words, which would represent visible things by their outlines, and invisible by the visible which accompany them." But practically nothing has been done in this direction. True, physicists, chemists, and certain technicians have evolved certain internationally recognised symbols, but the

inks, the words that relate what the scientist was about and the general method of his enquiry, are written in his own "phonetic" language; and so to study his subject in detail he has to be a practised linguist, having at least three languages at his command, as well as a capable student.

Attempts have been made, too, in the direction of "phonetic" languages that can be both written and spoken, but the barriers they have had to face were too much for them. For it seems their very conception was opposed to the laws of nature. People do not take to learning new languages. The late eminent philologist, Otto Jespersen, has said no one can learn more than one language, his mother tongue, perfectly, whatever his acquired ability may be in others. Memories of the real waste of time at school spent on learning foreign languages which we hated and which, moreover, we could acquire no more than a shaky, elementary knowledge of, may remind us of this. Such inability (and antagonism) is one good reason why Esperanto has failed (UNESCO has abandoned it). Nor can you force people to learn a new language. Mr. Bliss cites Stanley Rundle, "Language as a Social and Political Factor in Europe" (London, 1945) as mentioning that the Lithuanians were prohibited by penalty of death from using their mother tongue, with the result that 200 years after the verdict was issued, 93 per cent. of the population spoke ONLY Lithuanian. And how are you going to teach the complicated system of the man-made languages when some 70 per cent. of the world is illiterate. "The chief reproach to be addressed to Volapuk, Esperanto, Ido, Romanal, etc., is," says Albert Leon Guerard, ("A Short History of the International Language Movement," London, 1922), "that their conjugations are too subtle and too rich. The conjugation of Volapuk was extremely rich, but arbitrary and complicated. A Volapuk verb, according to Mr. Karl Lentze, could take 205,440 different forms."

But how did Mr. Bliss come to conceive the idea of a new universal language. As a research chemist, even though he had a fair command of four major European languages, he realised the difficulties he encountered in translating material written in a foreign tongue, but he had conceived no way of beating the difficulties. Now it happened that the Pacific war found Mr. Bliss and his wife marooned in China. There he started to learn Chinese writing, and he realised that, while those from the south could not converse with those of the north, people from all quarters of China could read the daily newspapers printed in Shanghai. But more than this, Chinese

writings 2500 years old, were easily comprehensible by modern Chinese. English prose and verse of the Fourteenth Century is not easy for an untrained English reader; and the English language of a thousand years ago requires special study before it can be read. But what was the reason for the universal understanding of Chinese? It was that the language was originally a pictorial one, and remains so, even though in the course of three or four millenia the characters have been modified and inconsistencies and useless symbols have appeared; yet basically Chinese is a pictorial representation of real things, of geometric reality.

Essentially, Mr. Bliss's pictorial "language" is a simplified Chinese: it is the clear, pictorial representation of real things as we see them. Each symbol looks like the object it represents; and where the "thing" is abstract, or intangible, it is represented by geometrical objects which are associated with the abstraction. Our language is termed a "phonetic" language, since we use symbols which represent sounds to form words, words which above a few hundred of some quarter million and more in the Oxford English Dictionary which remotely suggest the ideas they represent, "splash, biff, toot, quack, etc.," are nothing but a CONVENTION; they have practically no direct bearing on reality. Yet to represent all his ideas, Mr. Bliss uses only 100 symbol-elements.

The first twenty-five are already internationally accepted and therefore should provide no difficulty. They include the digits 0 to 9; the symbols for addition, subtraction, multiplication and division; the dot, comma, question mark, and arrow. Many of the succeeding symbols could be represented from the first thirty-nine but for the purpose of simplicity a happy mean is struck between complete analysis (using basic symbol-elements only) and pictorial representation. And semantography can be written with a specially adjusted typewriter in which the second set (which usually contains the capital letters) is made up of the geometric lines for the composition of the symbols. Thus the usual phonetic letters can be used with the Semantographic symbols. For Semantography does not aim to displace ordinary writing: IT IS MEANT ONLY TO BE AN AID, A SUPPLEMENTARY WRITING.

We have already observed how people are not eager to learn new languages and how in Lithuania the mother tongue could not be put down even through persecution. And Mr. Bliss is quite aware of this: Semantography is not out to replace, but to supplement one's native tongue, where necessary by an international code. He

recommends its use first of all for emergency warning signs with the language of the appropriate country under the symbols: these signs would be at once clearly comprehensible to the native for he can read his own tongue and easily comprehend the symbols too, and to the foreigner or the illiterate, who finds the phonetic language meaningless to him, but can recognise the significance of the symbols immediately.

But let us look at some of the symbols of Semantography.

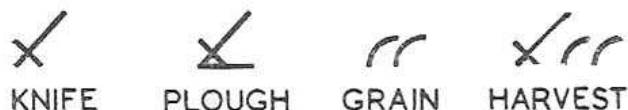


These symbols, which are almost self-explanatory, could be put into operation in Australian ports, where foreigners and new immigrants are not familiar with the English language. They could be used in public buildings, cinemas, theatres, etc. The symbol for FIRE indicates the wavy outline of a flame. Mr. Bliss is now preparing a set of warning signs for Australian factories (where many New Australians are working). The symbol for FIRE can be used for other warnings, like INFLAMMABLE, DON'T SMOKE, etc., and also for bush-fire prevention.



These symbols can be used for an international calendar, which can be read and understood in all languages. The sun over the earth indicates obviously DAY. The symbol for the MOON over the EARTH line indicates NIGHT. The numbers attached indicate the days of the week or the months of the year.

These symbols can also be used for agricultural instructions to illiterate farmers in the backward areas of the world.



A CUTTER OF EARTH is a plough and the symbol looks like a plough. Harvesting means cutting the stalks.

Let us assume that an agricultural research station has developed a special seed for special areas. It will be necessary to write some directions on the seed packages, when to plough, when to sow, and

when to harvest. The symbols shown above could be combined with the calendar symbols in these directions.



These are a few symbols from the list of Semantographic symbols for postal communication. They can also be used in correspondence, when writing in Semantography. Furthermore, Mr. Bliss envisages that cables in Semantography will be sent by Radio-Photo. At present commercial firms have to code and decode their messages, and then to translate the message in their native language. A Radio-Photogram in Semantography will need no translation. It can be sent for instance by an English firm to any country and read there in the native language.



The symbols for MAN and WOMAN are obvious, and similar to children's drawings. First, second and third person, are represented by the appropriate number. The plural is indicated by a multiplication mark on top. Now we can form a sentence.



The order of the symbols follows the order of the PHYSICAL ACTION.

The oblique line indicates a pen in position for writing. As such it indicates the material thing only. But if we place the action indicator on top, it symbolises the action performed with a pen.



Here are the 3 most important symbols of Semantography. Mr. Bliss realised that he had to devise a simple universal grammar, which fits all languages. Being a chemist, he based his grammar on the following assumption: All languages are used to describe the phenomena of our physical world; and the main manifestations of our world can be classified into MATTER, ENERGY, and what we may call the Life.

or MIND Force. All this happens in SPACE and TIME.

The first 3 groups are represented by the symbols shown above. MATTER is symbolised by a square to indicate that the structure of matter is not chaotic. On the contrary, a divine simplicity and harmony reveals itself in the structure of a crystal, and the geometrical arrangement of the molecules. The symbol for ENERGY indicates the Latin letter A in the word ACTUS, our English word Action. The symbol indicates also the primeval action on our planet, the throwing-up of volcano cones, and the thrusting-up of mountains.

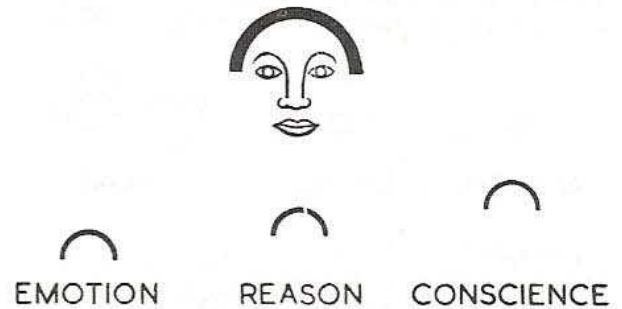
The symbol for human EVALUATION indicates the Latin letter V in VALERE, our English word Value and Evaluation. This outline suggests a cone standing on its point, a position which in physics is termed LABILE. As you will soon see, we can easily agree about words which indicate THINGS or ACTIONS, as for instance what is a PEN, and TO PEN. All words relating to THINGS and ACTIONS refer to something real, which exists outside of our brain. But human evaluations, which we express in words, for instance BEAUTIFUL and UGLY, depend upon the mind of each individual as HIS SYSTEM OF REFERENCE. And two individuals may never agree about their different EVALUATIONS of the same thing. Here is an example how those 3 symbols are used as indicators on top of symbols.



The second and third indicator refer to the verb and adjective. The first symbol referring to those nouns which are material THINGS, is usually unnecessary. We need not put this indicator on top of those symbols which by their outline indicate a MAN, a PEN, a LETTER, etc. The verb TO MAN refers to actions performed by men, as for instance to man a ship, to man a gun. The third indicator refers to how different minds may evaluate actions performed by man. Some actions may be evaluated as MANLY, meaning noble and heroic. However, some women, having had bitter experiences with men and their actions may use the word MANLY in quite a different way. The same applies to the evaluation of WOMANLY.

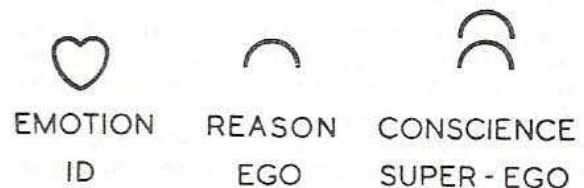
So far, the EVALUATION indicator has been used for adjectival derivations of words which represent material THINGS. But we have also words which refer to

reactions of our mind. For these we use the MIND symbol.



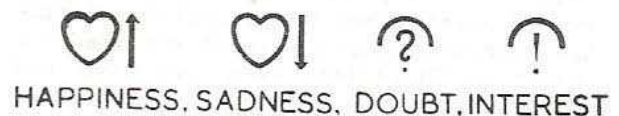
The mind symbol shows the outline of the upper skull, which encases the brain. The division into these 3 levels is real, and brain surgeons have operated on these notions, and restored to health and sanity, persons tortured by a perverted conscience.

The modern theories of psycho-analysis are based on the same notions. "We don't live our lives," said Sigmund Freud, "IT lives us. We are lived by unknown and uncontrolled forces." He termed therefore the part of the brain which contains the passions and emotions, the ID (Latin for IT). The medical Latin words for Reason and Conscience are Ego and Super-Ego. (This word has nothing to do with egotistic). To make these meanings more self-evident, the following alternate symbols are chosen.

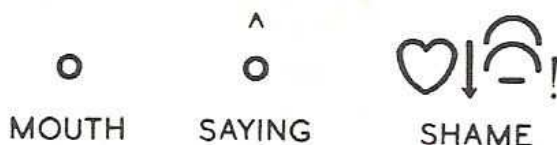


The heart is used in all languages to indicate emotion. In the symbol for CONSCIENCE we see clearly another mind superimposed upon the individual mind. According to Freud, it is the mind of the father, mother and people in authority. According to Gustav Jung, once Freud's co-worker, it is the mind of God.

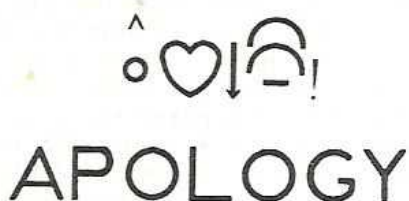
Here are a few symbols.



The plus and minus symbols indicate a positive or negative judgment of our mind. And here is another symbol combination, to indicate a complex meaning: apology.



APOLOGY is a verbal expression (a saying) of SHAME. SHAME is a downhearted feeling of what our conscience judges negatively as BAD.



The phonetic word has been placed next to the symbol, to show that the symbols do not take up more space than the phonetic symbols of the same size.

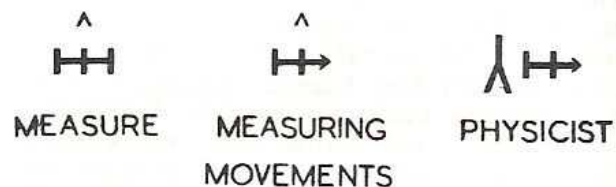
The next symbols refer to a favourite idea of Mr. Bliss. He has done years of scientific library research, and knows from his own bitter experience that the Babel of scientific publications "is a social problem of the first magnitude" (Hogben).

The flood of expensive scientific books and journals, which industrious publishers and printers pour out on poverty-stricken Universities is so great, that even the richest University cannot buy them all. Besides, many books are written in languages, of no use to many scientists.

Bliss proposes a simple universal science abstract, which should consist of inexpensive mimeographed filing cards, which students of every university could print on a duplicator. The result of researches in any science going on at a university should be given half-yearly on such cards in not more than 100 words in English (at Anglo-American Universities), in French (at French Universities), etc. These words should stand beneath the symbols. Anyone who knows English or French will read the words in these languages and need not bother about the symbols. Anyone else, interested in the research, would learn to read the symbols in his own language, be it Danish or Hindustani, or any other language. These research reports could be exchanged between universities, and any chemist, doctor, engineer, etc., could subscribe to these inexpensive cards for his particular field only.



The symbol for chemical is the outline of a retort, which is an age-old symbol for chemistry. ANALYSIS is clearly indicated as CHEMICAL DIVISION OF MATTER.



GAS is unpicturable, but if it is collected under water or a liquid it forms bubbles which go up.

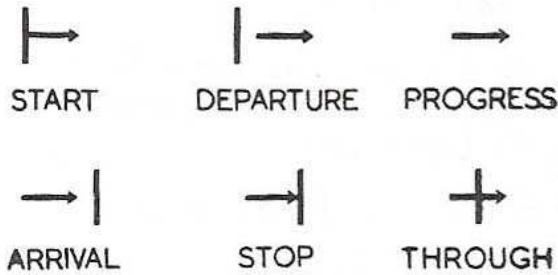


These symbols and the others shown above, are almost self-explanatory.



Here are a few symbols for medical research and case histories. The symbol for medicine is the simplified outline of the rod of Aesculapius. Medical men use already Latin words, as for instance ileum and colon. The symbols of Semantography can be used to form complete sentences, which doctors can read in any language. Intussusception means the entering of the ileum into the colon (parts of the intestines).

The next symbols represent ideas concerning space and time.



These symbols can be used in railway stations, time tables, etc. But they can be used in science, too, for they are constructed according to the relativity theory. Any directional movement may mean progress in any direction. What is needed is a system of reference, which is indicated by the lines of reference in the symbols above. We realise that these words are meaningless, unless referred to those lines of reference.

In our present war of words, the meaning of PROGRESS has been applied by people and parties who oppose each other. The symbols of Semantography teach us to ask for the system of reference, and not to accept vague and ambiguous words. Progress? Where to? To the building of parliaments or concentration camps?

Bertrand Russell has tested Semantography and has asked Bliss to symbolise the most controversial meanings, as for instance, the meaning of God.

Bliss has responded by drawing an age-old symbol, an eye inside an equal sided triangle. The triangle may remind us of the Trinity; the eye of the all-seeing mind of the Creator. Remove the eye and you have the symbol for nature, creation. The Greek philosophers have considered geometrical configurations as direct proof of the divine harmony in nature.



The mind contemplating the aspects of Nature symbolises Science and Philosophy in general. Bertrand Russell was completely satisfied with these symbols. He wrote afterwards: "I have been looking through your system of Semantography and I think very highly of it. The logical analysis is good. The symbols are ingenious and easy to understand, and the whole is capable of being very useful. Any man or men who will spend the money necessary to get your work printed will, in my opinion, be per-

forming an important service to mankind." High, too, was the praise of Professor Oliver L. Reiser, of the University of Pittsburgh, U.S.A., Chairman of the International Committee on Scientific Humanism, who said in his paper for the symposium "Operation Knowledge" of the American Association for the Advancement of Science: "Bliss . . . realised the ambition of the great mathematician Leibniz The system of Semantography has many virtues it provides a powerful stimulus and aid to President Truman's 'Point Four Program' Bliss's heroic work is certainly headed in the right direction This new language design comes with the high praise of Bertrand Russell, suggesting that we do well to study thoroughly Bliss's creation." Amongst other prominent figures who have admired Mr. Bliss's system of Semantography we may note Professor Lancelot Hogben, University of Birmingham (author of "Mathematics for the Million," etc., editor of "The Loom of Language"); Professor Carleton Washburne, Professor of Education, Brooklyn College, New York, John Metcalfe, of the N.S.W. Public Library, and many others.

Mr. Bliss lives Semantography. It is never out of his mind; he has a notebook at hand in case an idea should come into his mind at work; returning home after being a manual labourer all day, he works at his idea late into the night; and he is spending all his own substance in having his work published and publicised. But he is growing old, too. It is too much to expect a man to labour with his hands all day and with his mind all night, unencouraged and unsupported; to see him go down, his energy spent and his industry wasted, an heroic figure scoffed at because his idea was unusual, snubbed by the proud-blind intellectuals with the patronising "charming but positively fantastic." Louis Braille's (1825) auxiliary writing for the blind was scorned, too; it was rejected by the Academy and even his colleagues—but it has won through.

Mr. Bliss needs all his time to continue working on and perfecting his new writing; his plea is for support that will enable him to leave the factory and give all his faculties to Semantography. And if you are interested in Semantography, you can get more information by writing to Mr. Bliss, of 5 Maroubra Bay Road, Pagewood, N.S.W., and in doing this you will aid yourself and give Mr. Bliss much happiness and satisfaction.

W. A. Heaney, of New England University College, Armidale, is a member of the English Honours School in Sydney University.

SEMANTOGRAPHY

is an **AUXILIARY** simple Picto-Ideography for interlinguistic Communication between Scientists, Technicians, Businessmen, and People who don't understand each other's Language.

A Letter, a Primer, a Paper, even a Poem, printed, **TYPED**, or written in this "*One Writing for One World*"

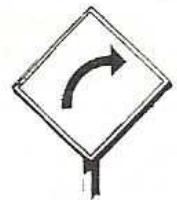
can be read and understood in **ALL LANGUAGES** without the usual translation. Its simple Logic and Semantics teaches people to spot instantly fallacious word propaganda. It provides the planetary Medium for Scientific Humanism.

1. **PROFESSORS AND PRIMITIVES**, Scholars and School-Children don't like to learn foreign Languages, including Esperanto and Basic English. But $1 + 2 = 3$ can be read and understood in all mother-tongues.
2. **THE BABEL OF SCIENTIFIC PUBLICATIONS** is a social Problem of the first Magnitude (Hogben).
3. **THREE-QUARTERS OF THE WORLD'S POPULATION** are illiterate, and divided into thousands of Languages and Dialects.



PICTOGRAPHS BRIDGE ALL LANGUAGES

They have proved successful in the Sciences, in Radio Engineering, on the deadly Highways of the World. Semantography is the logical consequence. It can be typed on an adjusted ordinary-sized typewriter.



SEMANTOGRAPHY, THE MEDIUM FOR AN INEXPENSIVE UNIVERSAL SCIENCE ABSTRACT

Small mimeographed filing cards shall be issued half-yearly by every University, containing the research results in 100 words in English (in Anglo-American Universities), in French (in French Universities), in Swedish (in Swedish Universities), etc. **AND THE PICTOGRAPHS** above the words. If you know the language you need not bother about the symbols. Otherwise you can read every Abstract in your Mother-tongue. Distributed and exchanged by an International Centre, every Scientist, Doctor, Engineer, etc., could subscribe to these inexpensive cards for his particular field.

EXAMPLES FROM "SEMANTOGRAPHY" by C. K. BLISS

100 Symbol Elements to overcome Babel in Reading, Writing and Thought



DOOR, ENTRANCE EXIT FIRE-EXIT

Symbols for Public Buildings, Cinemas, etc.



EARTH SUN DAY THURSDAY

Symbols for international Calendars.



LETTER, TELEGRAM, WINGS AIRLETTER

Symbols for Postal Communications. Radio-Photograms in Semantography need no coding, decoding and translating.



KNIFE PLOUGH GRAIN HARVEST

Symbols for Directions to illiterate Peasants on Seed Packages, when to plough, when to sow, when to harvest, etc.




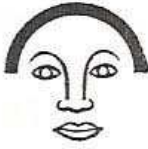
 MAN
 WOMAN
 I
 YOU

 MEDICINE
 DOCTOR
 INTUSSUSCEPTION
 ILEUM → COLON

A simplified Rod of Aesculapius for Medicine, in which Latin words can be used with the symbols.




 I
 PEN (A)
 LETTER (TO)
 YOU

The A-action indicator over the PEN (inclined writing position) means TO PEN.


 EMOTION
 REASON
 CONSCIENCE


ID EGO SUPER-EGO

The Heart is a conventional old symbol. The superimposed Mind signifies, according to Freud, the Mind of the Father, Mother and People in Authority. According to Jung it is the Mind of God.



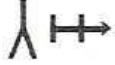
 MATERIAL THING
 PHYSICAL ACTION
 HUMAN EVALUATION




These are the 3 main symbols of the "grammar" of Semantography, dividing all words as referring to MATTER (square indicates structure), ENERGY (A-ctus, Action) and MIND (V-alere, Valuation).

 CREATOR
 NATURE
 SCIENCE
 SCIENTIST


Symbols for Believers and Unbelievers—in accordance with Greek Philosophy—the rational Mind contemplating Nature, its Harmony signified by geometrical configurations.

Here is an Example how the Logic and Semantics of Semantography works.


 MEASURE
 MEASURING MOVEMENTS
 PHYSICIST




 GRAVITATION, PRESSURE
 MIXTURE
 GAS




Gas is unpicturable, but in a liquid it forms bubbles, which go up.

 CHEMICAL
 CHEMIST
 CHEMICAL ANALYSIS

The outline of a retort is an age-old symbol for Chemistry. ANALYSIS is "analysed" as (1) Chemical (2) Division of (3) Matter.

 ABSORPTION
 WATER
 DELIQUESCENCE
 EFFLORESCENCE

 START
 DEPARTURE
 PROGRESS

 ARRIVAL
 STOP
 THROUGH

These Symbols can be used for Rail, Road, Ship and Air Communication. They show 2 Symbol Elements, (1) the ARROW indicating that something is moving, and (2) the LINE OF REFERENCE, indicating the space-time co-ordinate. Example:

START: Professor Reiser introduces Semantography to the AAAS, or YOU, wherever you may be, start reading this Leaflet.

PROGRESS: Your mind is contemplating this new Aspect of Science.

ARRIVAL: What Conclusions are you arriving at? Where is this going to stop? In a dustbin? On a dusty shelf? What will it mean to the Inventor? Dust to Dust? Please turn over.

TO THE TRUSTEES OF HUMANITY - THE LIBRARIANS,

TO ALL LEARNED AND LAYMEN ALIKE

who appreciate a work for its potential usefulness for the generations to come, - and who are willing to bring it into the libraries of their hometown.

The Purpose of this Pamphlet is to acquaint you with a work on a new idea. It may take decades until the publishing business will see no monetary risk in these publications which are printed on a non-profit basis and offered below cost.



Bertrand Russell

BERTRAND RUSSELL wrote that spending money on this work means "performing an important service to mankind."

ENLIGHTENED LIBRARIANS HAVE RESPONDED

Harvard University, the Library of Congress, and others have placed standing orders for all past and future publications on

SEMANTOGRAPHY

3 Volumes by C.K.Bliss, B.Sc., of Sydney, Australia
(Library of Congress Catalog Card No. 55-65550)
and

THE SEMANTOGRAPHY SERIES

(Library of Congress Catalog Card No. 55-14351) comprising the growing collection of all pamphlets, brochures, books, university lectures, treatises, courses, controversies, correspondences, articles in newspapers and journals, etc.etc.

What is Semantography ?

It goes back to a 300 years - old speculation made by the great mathematician Leibnitz (1646 - 1716). He realized the immense practicability of mathematical symbols and their operations for solving many problems in many fields.

A new Mind Mathematics for Man

He prophesied therefore that one day a Universal Symbolism will be invented, in which every statement in every language could be written down in simple symbols and operated upon in order to find out the unknowns, the variables, the ambiguities, the demagogies, the falsehoods, and the truth.

A new Medium for Mankind

Leibnitz prophesied a happy by-product of this new mind mathematics. The symbols would provide a new medium for mankind. Just as $1 + 2 = 3$ is read and understood in all languages, so those new universal symbols would bridge all languages.

A letter, a book, a paper, even a poem written in this new "One Writing for One World" could be read and understood by all mankind in all languages without translation.

(continued next page)

BERTRAND RUSSELL: "Semantography..I think very highly of it.....Any man or men who will spend the money necessary to get this work printed will, in my opinion, be performing an important service to mankind."

JULIAN HUXLEY: "Semantography provides something of real importance."

Prof. OLIVER L. REISER: "Bliss's heroic work...a powerful stimulus...he realized the ambition of the great mathematician Leibnitz."

Prof. LANCELOT HOGBEN: "interesting, stimulating, fascinating, ingenious."

Prof. G. PATRICK MEREDITH: "Sheer fascination.: such an important creative advance."

Prof. CARLETON WASHBURN: "ingenious... could be of great value."

Prof. V. A. BAILEY: "deserves every encouragement by private and public means.... would be of great value to scientists."

Librarian JOHN METCALFE: "These books should be available in the larger public and university reference libraries throughout the world."

Even for Children and Illiterates

But, said Leibnitz, in order to be of help to all humanity, those symbols and their operations must be so simple as to be understood even by children and illiterates. In fact, he wrote, real things must be shown in pictorial symbols in order to distinguish them from abstract meanings, which indeed may mean anything.

An impossible Idea

This latter condition provoked the thought that Leibnitz's idea was impossible to realize. At last, the problem has been solved in Semantography. It fulfills all requirements of Leibnitz's prophecy. It has immediate practical applications in many fields.

Semantography for Safety

Leibnitz's idea is already in practical operation in a field where the bridging of the language barrier is a matter of life or death - on the motor roads of the world. The pictographic symbol of a bent arrow means CURVE in all languages.

Semantography for Social Relations

Parents and children, housewives and grocers, managers and workers, diplomats and demagogues do not argue whether $2 + 2 = 4$ or perhaps 5? They have learned the symbols of mathematics and how to operate them.

But they argue terribly about other statements made at the breakfast table, or the conference table, at the political platform or in the paper. A short training in the operational Semantics of Semantography could enable even youngsters to realize at once which arguments will lead nowhere - except to the breaking-up of peace within the family, the community, the nation, the family of nations.

Semantography for Science

The greatest handicap to scientific research and progress is that results are published in too many expensive journals printed in too many languages. The inventor of Semantography, a scientist himself visualizes an inexpensive international science abstract on index cards to be exchanged between the universities.

The cards are printed or mimeographed in the language of the issuing university AND in the symbols of Semantography, which can be typed on an ordinary-sized typewriter. Thus all scientists can read them in all their languages - without translation.

Semantography for Society

The application of Semantography in many fields are treated in detail in the Books and the Semantography Series. Here are a few other applications in

LAW: Elimination of ambiguous terms which make justice a costly business, etc.

INDUSTRY: Justice for the inventive-genius by providing a world patent applica-

tion in Semantography; Directions on technical equipment readable in all languages, etc., etc.

COMMERCE: Instant recognition and elimination of vague meanings in business contracts; catalogues, invoices, custom papers, circular letters, etc. readable in all languages; radio-photo cables which need no coding, decoding and translating; correspondence in Semantography between firms speaking different languages, etc.

COMMUNICATIONS: Traffic symbols on roads, railways, trams, buses, ships, planes, mail, time tables, public places, etc.

AGRICULTURE: Co-ordination of world research; directions on seed packages for illiterate farmers in backward countries divided by hundreds of languages, but being able to read pictorial symbols.

MEDICINE: Interlinguistic co-ordination of research; treatment of psychological disturbances caused by vague words, etc.

LOGIC: Semantography provides a simple Semantics for the Citizen, a Logic for the People.

What Semantography is not

It is not a new Esperanto. It is not a picture language. Esperanto needs translation like any other language. Semantography is readable in any mother tongue. You can write in Esperanto, or in other languages: "The Democratic People's Republic of Communist China". But if you write this in Semantography, it becomes as non-sensical as $3 = 1$.

Mankind's most urgent Need.

National differences and strife stem from language differences. Scientists agree that the first step to democratic government is literacy. Three quarters of the world's population are illiterate, divided by languages, dominated by demagogues and dictators.

Only one system has successfully bridged all languages and all arguments: the symbols of mathematics with their rigorous logic of truth versus falsehood.

Now we have a new Medium for Mankind, which provides also a new Mind Mathematics for Man. It may spell doom to demagogues and dictators in the political, and even in the domestic scene: the dominant father, the cheeky son, the nagging wife, the demanding daughter.

Semantography is the first cure offered for the miseries caused by words of all languages, which are vague, ambiguous, fallacious, and which endanger peace.

YOU, your Vision and your Help

The trouble with Semantography is that it is entirely new. It's not yet a money-making proposition for publishers. If you spend a little money for providing some publications for public or private libraries, then you will, in Bertrand Russell's own words "be performing an important service to mankind."

If no Catalog is attached to this leaflet, please ask for it by sending 15 ¢ or 1 s mailing fee (or 45 ¢ or 3 s airmail fee) or the equivalent in stamps of your country to

SEMANTOGRAPHY PUBLISHING CO. (Non-Profit)
5 Maroubra Bay Road, Pagewood - Sydney, N. S. W. Australia
2 Vicar Str., Coogee, Sydney, Australia

THE LANGUAGE RIOTS AND MASSACRES IN INDIA, CEYLON, AND ELSEWHERE

When this book goes to print (February, 1965), the Government of India had declared Hindi to be the official language of a country of over 300 million people, who are divided by 14 major languages and 831 dialects.

Not only are the languages different. Even the phonetic letters differ. Hindi writing is utterly incomprehensible to people who write in Tamil letters. Besides, the majority of the people of India are illiterate.

During the 15 years of India's independence, the official "associate" language was English, which most educated people of all provinces understood. Henceforth, however, all correspondence with the authorities must be in Hindi, a foreign tongue to more than 120 million people.

This government decree resulted in disaster. People rioted. Others committed suicide in protest, setting themselves on fire. The police arrested thousands. Many were killed.

Similar language riots and massacres have occurred in previous years in Ceylon, and other multi-lingual countries.

Fourteen years ago, the author offered his pictorial symbol writing **free** to the Government of India. He wrote many letters to the authorities, to the Unesco office in New Delhi, to maharajahs, to influential and financial people in the public life of India, to pressmen and to others.

In Sydney, he demonstrated to the secretary of the High Commissioner of India in Australia, that his pictorial symbols could be easily grasped by all illiterate millions of India, that it can be written, typed and printed for government notices and correspondence.

It was all in vain. There was no response.

Four years ago, he wrote an article "**India and Semantography**" which appeared in English in the Indian scientific journal DARSHANA (Sanskrit for wisdom). He showed there many of his pictorial symbols, which even illiterates can easily grasp.

This article forms now Semantography Series No. 188. Only the first page is reprinted here, because it describes the difficulties existing in many multi-lingual countries. The article closed with these words:

"What is needed now is that a group of far-sighted men and women of India should form a committee for the experimental study of this 'One Writing for One India'. Interested readers are invited to write to the managing editor."

There was no response whatever.

A SUMMARY OF THE AUTHOR'S THOUGHTS AND FINDINGS

Reprint of an article which the author wrote in 1964 for a scientific journal. It is of the utmost necessity that you should read first page 13 and 14 titled **THIS WORK LED TO UNBELIEVABLE DISCOVERIES**
Then only should you continue reading here below.

This work has 5 different aspects, each one more difficult to believe than the next. These aspects are:

1. **A simple symbol writing** with only about 100 pictorial symbols, bridging all languages for communication and commerce, industry and science. Illiterates of all tribes can learn to write it.
2. **A simple semantics** contained in the symbols, exposing vague and ambiguous meanings. These are the words spoken by the demagogues in the homes and in the nations. Children can learn to recognize them.
3. **A simple logic**, by which those words are exposed which seem true for one person, and false for another one. These are abstract meanings which lead to arguments, violence and war.
4. **An archeological discovery** in the caves of old stone age man who lived 30,000 to 50,000 years ago. Proof has been found that he did not kill his fellowman. Only new stone age man became a killer and a cannibal. Since then, war killings have been incited and justified with abstract words, spoken by the leaders of men.
5. **The biological proof** that human warfare is due to abstract language, which has perverted the minds of men. This proof will be dealt with in the following pages.

Believe me, dear reader, I had no intention to venture into the sciences of archeology and biology. I was only searching for a better symbol for that meaning which is spelt in the various languages l-i-f-e, l-e-b-e-n, v-i-e, v-i-t-a, etc.

On page 14 I asked you to realize what happens in a golf ball and an egg. We found that the living atoms of the egg **THINK LOGICALLY**, and **CO-OPERATE WITH EACH OTHER** when they build their perfect aeroplane. They also **HELP EACH OTHER** when they repair their damaged aeroplane.

LOGICAL THOUGHT, CO-OPERATION, and MUTUAL AID, we find them in the atoms of an egg. But we cannot find them in many men of many communities. They **DON'T** think logically, they **DON'T** co-operate with each other, and they **DON'T** help each other. Instead, they destroy each other, first with words, then with weapons.

WHY? What causes the difference between life in an egg community, and life in a human community? And what is that mystery called **LIFE**, which makes atoms of an egg act logically and ethically?

I searched all books on biology I could find. Alas, the biologists hide their ignorance behind words of "biological this" and "biological that". But bio-logos means only words about life. It does not tell what life really is.

At last I found the only honest scholar, Harvard Professor Percy Raymond, who gave a clear answer. He said: "What life is, no one knows." It's a profound mystery.

Take heart therefore, dear reader! You need not be a biologist to understand these new thoughts and findings. Continue now reading the following article which I wrote in 1964 for a scientific journal. A new world will open to you, a world of new hope for you and the whole human race.

Professors L. B. Atreya, and J. P. Atreya, editors of the scientific journal DARSHANA (Sanskrit for wisdom) of Moradabad, India, decided in 1964 to publish a volume under the heading: 76 articles by 76 eminent writers of the world in honour and celebration of the 76th birthday of the great scholar and President of India Dr. S. Radhakrishnan. They invited me to contribute one article.

Many of the writers did not associate their article with Indian thought. But I did. The history of all the peoples contain examples of the catastrophes caused by abstract language, and India is no exception. Consequently, the first page of my article deals with Indian thought, all other pages deal with the meaning of the mystery of life. This article is reprinted here below by kind permission of the editors. It bears the title

LIFE AND INDIAN THOUGHT

dedicated to the memory of my late wife Claire Bliss

Language and religion

I am a poor product of Western thought and I know nothing of India. I learned in bewilderment that millions of Indians are degraded as "Untouchables". Why? Apparently some religious leaders of the past said so. I learned in sorrow that millions are always hungry, and I learned in consternation that they feed millions of marauding cattle, which they are not allowed to eat. Why? Because cows are sacred. Who said so? Apparently some religious leaders of the past.

I learned that millions of monks are roaming India. Food is put into their begging bowls by the people who are beggars themselves. Why? Because monks are sacred men. But in a survey on India I read that 80% of these monks are fakes. Why are they fed? Apparently it is impossible to distinguish between monks who are saints and monks who are loafers. Both use pious language.

I learned that some monks carry a piece of gauze before their mouths for the protection of flies. Yet, they do nothing for the protection of humans who die like flies. I read in horror that Moslems and Hindus massacred each other in 1948.

But the same religious hatred exists in the West. The adherents of the 400 divided Christian denominations despise heartily each other—thanks to their religious leaders. Throughout the centuries, Christians have massacred Christians in the name of Christ.

Articulate language is man's most important tool for communication and co-operation with his fellowman. But apparently religious language is a tool for division, dissension and destruction.

Language, race, and nationality

In 1938 new massacres began to sweep Europe, this time caused by the "religion of race". Hitler and his henchmen started to exterminate inferior races. I too was transported with millions of others to the extermination camps of Nazi Germany.

Buchenwald concentration camp was commanded by the sadist Koch. His wife Ilse loved lampshades from human skin. Koch loved creatures in cages. He had a zoo of caged animals erected next to the gigantic cage which held 20,000 human animals.

Often I stared in sorrow from my cage into the cages of my fellow creatures, they too victims of human bestiality and brutality. Aren't these words derived from the animal "beast" and "brute"? But can animals ever be so brutal as human beasts?

I was released through the love of my good wife Claire, who fought fearlessly the Gestapo. We fled to China, and after the war to Australia. The greatest massacre in human history had just ended. Thanks to the linguistic concept of a "national language" and "nationality" (unknown a few hundred years ago) the nations had slaughtered each other by the millions.

Now, the new linguistic concept of "communism" promises more murderous massacres. The leaders of mankind are engaged in making monstrous missiles, and megaton bombs, in order to kill off hundreds of millions of people, who will be led with language to the slaughter bank.

All languages are without logic

Apparently, the most desperate task in the world is to expose the catastrophic falsehoods in the many words which lead to strife and war. What every boy and girl should learn in school is a simple semantics and logic in order to recognize the ambiguities, the fallacies, and the demagogues in the words which cause debates, dissension, despair, destruction and death to many millions.

I developed such a simple semantics and symbolic logic which I called Semantography. The greatest living logician Lord Bertrand Russell wrote that support of my work is "an important service to mankind". Sir Julian Huxley wrote that "it provides something of real importance". Professor Oliver L. Reiser declared before the American Association for the Advancement of Science,

"Bliss realized the ambition of the great mathematician Leibniz."

Three hundred years ago, Leibniz dreamed of a simple system of pictorial symbols which could be operated like mathematical symbols in a simple "Algebra of Thought", and which could be read (like $1 + 2 = 3$) in all languages. The first issue of Darshana contains my article "India and Semantography" where I proposed the use of my pictorial symbols for bridging the languages and dialects of India.

I sent out informative letters to thousands of educators. Few showed any interest. I forgot that their masters in the governments are mostly demagogues and dictators. A simple logic would enable everybody to see through the falsehoods of their speeches. They wouldn't like this. Worse even, everybody would see through the falsehoods of his own speeches. Nobody would like that. But the worst are my findings on the consequences of articulate language.

In the following pages only a meagre outline of my thoughts can be given. You can read all in detail in my writings which are available from Semantography Publications, 2 Vicar Street, Coogee, Sydney, Australia.

It was easy to find logical symbols for words on which people can agree, like sun and moon, day and night, etc. But there are words which

have the opposite meanings for people who oppose each other. These are the meanings of good and bad, righteous and evil.

Brock Chisholm on wars and words

Shortly after the second world war, the United States Government invited the eminent psychiatrist Dr. Brock Chisholm (later the first Director General of the World Health Organisation) to lecture on the burning question:

“Why does man go to war against his fellowman?”

Chisholm’s answer created an uproar among the various religious leaders. He blamed their pious language, and especially their catastrophic use of the word “evil” for many massacres among men. Hatred is incited against other people by saying that they are evil, because they pray to other gods and obey other priests and kings. Soon there was slaughter. Of course, the accusation of “evil” was usually only a pretext for plunder. But it worked beautifully in the minds of men. They killed with a clear conscience the evil enemies.

New insight into animals

If Chisholm is right, how is it with those creatures which have no articulate language—the animals? I searched through books on zoology and found that untold trillions of the tiniest and the largest animals adhere strictly to the ethical law “Thou shalt not kill” even when they are starving. They live by the food provided by the plants.

However, there are other animals, which must have gone through terrible times millions of years ago. They had learned to kill other creatures for food. But they don’t kill their brothers. **Lions don’t kill lions, tigers don’t kill tigers**, wolves will die of starvation in a severe winter, but no wolf will kill a fellow-brother-wolf.

Furthermore, if a lion baby is taken away from its killer parents, before it receives from them an education in murder, it will not kill. It will remain the best of pals with other animals, and will eat with them out of the same trough.

Of course, animals get sometimes angry at each other. In the mating season there are mighty scraps over female favours. But the wrestlers have no intention to kill nor eat each other.

Ashley Montagu on ethics and animals

Professor Ashley Montagu summed it all up in these fantastic words: “Among the same species of animals the highest ethics is supreme law.”

He proved too what every zoologist knows, namely that cannibalism among the same species of animals is extremely rare, and it happens only when the animal is “out of its mind” by panic, the sudden loss of freedom, etc.

In terrible contrast, human cannibalism is practised in cold reasoning in an open boat, or in religious reasoning when the high priest presides over the frying and the feasting on the evil enemies.

The unescapable catastrophic conclusion from all these scientific facts is:

**MAN IS THE ONLY SPECIES WHICH KILLS ITS OWN KIND.
MAN IS THEREFORE ETHICALLY THE LOWLIEST CREATURE
ON EARTH.**

Human warfare is not biological warfare

The zoologists, biologists, moralists, and militarists try to explain and excuse human warfare. They say that "biological warfare" is going on among the killer animals, and human warfare is part of it. But this is a lie.

Biological warfare is the hunt for food from other species.

Human warfare is the hunt for destruction of the same species.

The difference is tremendous. And what makes it so horrible is, that soldiers have no desire to kill the fellows of the other side.

The dawn of abstract thought

A fantastic thought gripped my mind. If articulate language has perverted the mind of man, as Chisholm said, how was it in the distant past, when man emerged from the animal, and had NOT YET evolved articulate language?

Bertrand Russell said that it must have taken untold generations of primeval men, until they realized that two men, and two tigers, and two snakes have something in common, namely the abstract notion of TWO. Similarly I thought, it must have taken untold generations of primeval men, until they realized that a ferocious tiger, and a poisonous snake, and a dangerous man have something in common, namely the abstract notion of BAD.

What to do with something "bad?"

The remedy for a bad tiger, and a bad snake is simple: kill it! From this kill to the kill of the bad man was only one step in abstract reasoning. The next step was organised warfare against the bad people across the river.

Chisholm said that human warfare is only due to a mental perversion, caused by abstract language. It's a brain disease, an epidemic, and doctors know to-day how to stop epidemics. First, we must find the virus, then the vaccine, said Chisholm.

The virus is, according to Chisholm, abstract language. But he could not offer any proof that human warfare started with the emergence of abstract language.

If only I could find the proof in the distant past that man was not a killer of his kind—then Chisholm's theory could give mankind the breath-taking hope that human warfare could be abolished by psychiatric semantic treatment of the populations, using the new logic and semantics.

Search in the prehistory of man

I studied the 7,000 years of recorded human history. Alas, the historians recorded in ancient times as in modern times, that the righteous kings of kings made war on the evil kings and slew them and their men. For older records I had to go down into the caves of stone age man. Archeologists reported that the kitchen-refuse heaps of neolithic man contain animal and human bones intermingled and broken to extract the marrow. "They were cannibals" the scientists say. But no signs of cannibalism is found in the caves of paleolithic man who lived 30,000 to 50,000 years ago. And in their cave paintings I found the proof I was looking for.

Man was, and still is, a hunter of animals, which he needs for food. He is proud of his victories. The caves of paleolithic man show the

same pictures as modern hunting lodges: animals pursued by hunters. But nowhere do we see a man raising a weapon against another man. Apparently, the idea to hunt and kill his fellowman did not enter the mind of paleolithic man. Otherwise he would have depicted his victories over men, as did modern man from 5000 B.C. to our time in monuments, in the market places, and in museums.

Which archeological discovery is the most important one?

What has been found so far, that was so important? Important broken pottery, broken artefacts, broken tools and trinkets. Important jewellery, sarcophaguses and mummies, and important inscriptions?

What do these "important" discoveries tell us? That the potentates lived in splendour, and the people in squalor. Haven't we read this before? Is all this so really "important archeology"?

Now I claim to have found that human brother killing was absent before about 15,000 B.C., and that war is not innate in human nature. Does any other archeological discovery give mankind any hope for a future without war?

Alexis Carrel on logic and ethics in living atoms

I began to look for more evidence of ethics as a natural force in the universe. I found it in the findings of the eminent medical biologist Alexis Carell. He proved that the atoms which build living cells, and the cells which build complex organs and organisms, are guided by a supreme ethics. He wrote:

"Cells act as though each of them understood mathematics, chemistry, and biology, and unselfishly act for the interest of the entire community."

What does this fantastic statement really mean? Let me explain it to you in a fantastic story.

The greatest story ever told

Imagine our young planet one billion years ago. Torrential rains and terrific thunderstorms rage over the surface of a turbulent ocean. In its raging waters atoms and molecules, sand and pebbles, are tossed about in wild and aimless chaos—until something happened—the greatest moment in the history of our earth.

We don't know how it happened and why. But we know that it happened. Inspired by some mysterious force from the depth of space, a group of atoms and molecules began to form an ethical co-operative in which each one "acts unselfishly for the interest of the entire community." And so the first one cell creature came to life—the amoeba, which still sails the seven seas. They built their nucleus, which is in fact their Town Hall with various departments for food gathering, food processing, food distribution, waste disposal, oxygen renewal, transportation, and medical and repair stations, should an accident happen to some brother molecules.

Their Town Hall is no Tammany Hall

There is no greed, grab, and graft. There are no bureaucrats and no aristocrats, no patricians and plebeians, no brahmins and untouchables, no demagogues and dictators, and no priests, rabbis, mullahs, monks, and other men of dividing words. There is only one ethical principle at work: **"One for All and All for One."**

Later they divide into two communities. And as the millions of years pass by, these ethical cells “act as though they understood mathematics, chemistry, and biology”—although a million times more than all our professors of mathematics, chemistry and biology—they built more and more complex organs and organisms with more and more ethical engineering wonders: a miraculous heart, eyes, ears, lungs, brain, bones, and the most fantastic chemical factories—for one ethical purpose only: that the cell communities of creatures should be able to survive the rigours of nature.

Survival of the fittest babies

Here is but one example. There was abundance in the sea, but for the creatures on land there were often terrible times of starvation and death. Billions of babies must have died. And so our ethical engineers were again inspired by the cosmic force. They began to build into the mother animals a complex processing plant with udder and nipples—and when the babies arrived—lo, there arrived also the most wholesome of food for them: milk.

For Western scientists, however, my tale of ethical co-operation is nothing but blooming ballyhoo. “There is no sense nor ethics in the universe,” they cry, “only chaos!” All living beings were evolved by chaotic chance combinations and mutations of atoms and molecules without any aim or purpose. When the waters receded and the fish were left on dry land, they grew legs and learned to walk. Later they grew feathers and learned to fly.

It was just as simple as that. But a fish, or you cannot grow feathers if you want to. A miraculous ethical energy must work in the living cells of your mother when you began life as a foetus in her womb. They built the amazing organs which you need for survival: a heart pump, television eyes, ear telephones, and many more engineering miracles.

The most fantastic feat of ethical engineering

When you are injured, the cells in the central switchboard of your brain send out directions over the electric nerve network. Medicines are manufactured and shipped through the bloodstream to the scene of the accident. Ambulances and nurses arrive to help the injured brother cells. Then repair cells begin to rebuild the broken bone, the broken muscle, the broken skin—until all is health and happiness again. Don’t think that your doctor can heal. He can only help the ethical cells to do the healing. You owe your life to them.

**THIS IS THE GREATEST FORCE IN THE UNIVERSE:
ETHICAL CO-OPERATION FOR THE CREATION OF HIGHER
CREATURES OF HIGHER HARMONY.**

Darwin and the Darwinians

“This is utter nonsense,” the scientists cry. Darwin had explained that creatures evolved through the merciless selection by the survival of the fittest. But the Darwinians are deceiving themselves and the world with language. They have perverted Darwin’s own words.

Imagine a pack of wolves in an ice age. Which wolves will survive? Those, whose cells are fittest in ethical co-operation to produce the warmest fur, the strongest limbs, the keenest eyesight, the greatest intelligence, stamina and endurance.

Imagine helpless animal babies in a catastrophe which overtakes a herd. Which babies will survive? Those, whose parents have brain cells which are fittest in co-operation to produce the greatest love and intelligence, care, conscience and courage. In my writings I have cited numerous instances of animal parents who sacrificed their lives so that their babies shall survive.

But ethical co-operation of cell communities goes further than the family bond. Single creatures form a community with a leader who "acts unselfishly for the interest of the entire community". The queens of bees and ants are the hardest workers of them all. The leader of an animal herd risks his life first, when he guides the herd over mountain cliffs. He watches out for danger, when the others graze. His senses are taught even when he snatches a biteful of grass, or an hour of sleep. He has less leisure than the lowliest of the herd.

The leaders of men

In terrible contrast, most leaders of human communities were, and still are, the most selfish despots. And their lackeys in the schools and the churches teach children to adore and obey the monsters on the throne, who became leaders by their "divine rights". The shameless trick is done with words.

In the communist countries Darwin is revered like a god, and his theory is perverted to mean survival of those fittest in despoty, who can command the fittest bodyguards, the fittest batallions, the fittest bombs. Then the despot is killed by one of his officers, and he himself becomes the new despot. When he faces chaos, he plunges his people into a war to create more chaos. All this is in line with the theories of our scientists who proclaim that this universe is the product of chaos. And so they are leading mankind into the chaos of self-destruction by their nuclear devices. They refuse to see even the ethical co-operation working in the cells of their own bodies.

Ethics in the Universe and a creature called Claire

My friend Professor Reiser, the philosopher, explains in his cyclic-creative cosmology that besides the seen universe of matter, there must exist an unseen ocean of energy into which matter dissolves, and from which matter is created as hydrogen atoms in the depth of space. May I add my belief that there must be an unseen ocean of ethical energy which manifests itself in the cells of all living creatures.

The living cells which built the body of my wife Claire, produced in ethical co-operation a masterpiece of love and affection, intelligence, care, conscience, courage, and beauty. Now that she has left me in sorrow, I cannot believe that all which remains of her, are her ashes only. The ethical agens which pervaded her body has returned to the unseen ocean of ethical energy, and new creatures are created which are imbued with it. For me, the spirit which was my wife is recreated in the most ethical of all living creatures: the flowering trees. Their cells produce in ethical co-operation sweet nectar for butterflies and insects, sweet fruits for animals and humans, and sweet beauty and harmony for all to behold.

(please turn to next page)

When the third anniversary of Claire's death came in 1964, I repeated the thoughts expressed in the foregoing page in this card and picture, and sent it to all her friends.

"Our Universe is permeated by invisible gravitational and electrical energies which manifest themselves in the majesty of stars and planetary matter. On temperate planets another energy manifests itself in the atoms of living matter.

This energy creates within the wombs of mother animals amazing organs and organisms of co-operative complexity, within which, as Alexis Carrel pointed out, "Cells act unselfishly for the interest of their entire community." When you cut your finger, the cells of your body rush to help their injured brother cells. It's "All for One and One for All." This is the manifestation of ethical energy which permeates the spaces of our universe.

The living atoms which built the body of my good Claire produced in ethical co-operation a masterpiece of love, intelligence, care, conscience and beauty. On the 14th August, 1961, this ethical agents left her body, and returned to the invisible ocean of ethical energy, to reappear in other creatures like Claire on other celestial bodies.

For me, the ethical agents which pulsated in Claire appears in the most ethical of all creatures: the flowering trees. Their cells produce in ethical co-operation sweet nectar for butterflies and bees, sweet fruit for animals and humans, and sweet beauty for all to behold."

These lines are from an article which appeared in 1964 in a volume under the heading "76 articles by eminent writers of the world in honour and celebration of the 76th birthday of the great scholar and President of India, Dr. S. Radhakrishnan."

The editors, Professors B. L. and J. P. Atreya, invited me to contribute an article which appeared under the title "Life and Indian Thought." A reprint of the full text will be sent to you on your request.

C. K. BLISS



I won't complain, no more to near and far,
I feel you here with me and high above.
I see you sweetheart smiling in the stars,
And know we are together still in love.

Ich will nicht klagen mehr in alle Fernen.
Ich fühl Dich hier und in der Sterne Schein.
Ich seh Dich Liebste laechelnd in den Sternen,
In liebendem Beisammensein.

Read the Story of Claire, p. 813.

I N T E R N A T I O N A L
S E M A N T O G R A P H Y

A non-alphabetical Symbol Writing
readable in all languages.

A practical tool for
GENERAL INTERNATIONAL COMMUNICATION
especially in
SCIENCE, INDUSTRY, COMMERCE, TRAFFIC, ETC.
and for
SEMANTICAL EDUCATION,

based on the principles of ideographic
writing and chemical symbolism

by

C. K. BLISS B.Sc.

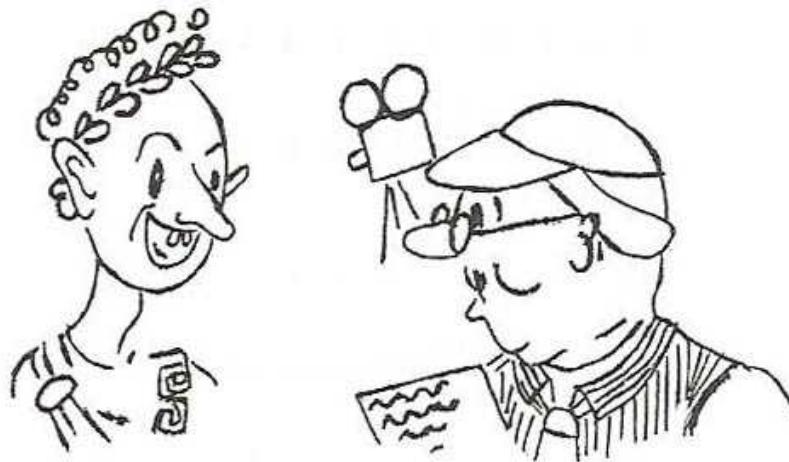
Research Chemist

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Sydney, Australia



"You will act as a Roman senator;
understand? How old are you?"
"I was born in MDCCCLXXXVIII."

A person who doesn't know what MDCCCLXXXVIII means, may dismiss this joke as utter nonsense.

This should be a warning!

Don't judge the symbols in this book as nonsense, just because - by thumbing through the book - you don't grasp their meaning immediately.

A little effort on your part, will make them meaningful to you, just as the symbols 1888 are meaningful to you right now, and MDCCCLXXXVIII was meaningful to a Roman.

In reading this book, follow Francis Bacon who said:

"Read not to contradict or confute; nor to believe and take for granted; nor to find talk and discourse; but to weigh and consider."

The opinions of the author in this book are relative having some sort of validity only with regard to his mind as system of reference. Any similarity to opinions beyond this limited range is purely coincidental.

THE STORY OF THIS MANUSCRIPT

By the time this manuscript is sent out, seven years will have passed, since I began work on this idea. After 4 years of trials I started to write it down. When the first manuscript was finished, I didn't like it, scrapped it, and started again. In the same manner, I tore up the second and the third manuscript, although they seemed an improvement. When the fourth manuscript was finished, polished and corrected, I could not find a person who could do the typing and the drawing on wax stencils for duplicating. So I had to do it myself.

Looking at the first sentence of the first chapter, I didn't like it ^{at} all, and so I started to hammer away ^{on my typewriter} a completely new manuscript with new chapters, even new ideas, discarding some symbols and simplifying others, and all in the course of my typing directly onto the wax. You may know that corrections of a letter, a word or a whole line on a wax stencil are tedious jobs. Had I typed directly onto a linotype machine, corrections and removals of whole paragraphs would ^{have been} much easier. The wax surface exasperated me. It interfered with the flow of thoughts. I realised that I may never finish this manuscript by never ending my corrections. So in despair, I let them stand, the awkward expressions, the errors, the symbols changed in the midst of the book, the inconclusive arguments, the repetitions and (shame on me) the vague words and phrases, which I realised with horror when re-reading the typed page. I committed all this - only in order to finish it. Now it is finished, I am sure, I don't like it - but it may give you an idea, what could be done about it.

Some "bric-a-brac" pages and chapters (like these ones) I wrote at one time or another, because they seemed a good idea to me at that time. Now... anyway, I hope the editor will clear up all this mess.

Some repetitions I made deliberately. First to impress upon the reader the important points in the various different aspects and circumstances. Secondly, because I realised that most people have not much time and so they thumb through the books, and often read only that chapter, which falls in their sphere. So I repeated some arguments, rules, symbols. I arranged the reading matter in the beginning to suit your time table.

ALL SYMBOLS IN THIS BOOK

are drawn FIVE TIMES LARGER in size than they would appear in print. This is done in order to show their extreme simplicity, and their maximum saving in space and time when compared with ordinary alphabetical letters.

This is therefore a new unheard-of shorthand writing which can be read in all languages. The following example will illustrate this:

This symbol \boxtimes means a letter. These two arrow symbols \rightleftharpoons mean to and fro, forward and backward, etc. Hence this compound symbol $\boxtimes\rightleftharpoons$ means letter correspondence.

But if these symbols are drawn 5 times over-size, as they are drawn throughout this book, then the alphabetical letters would have to be correspondingly 5 times larger too, as shown below:

$\boxtimes\rightleftharpoons$ letter
correspondence

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in order to ensure uniformity, and prevent a new Babel

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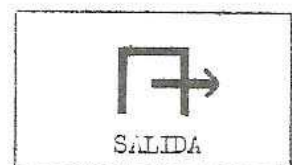
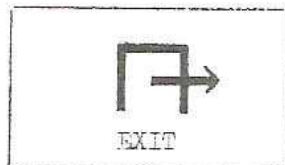
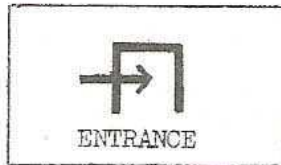
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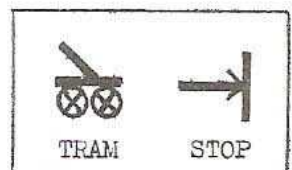
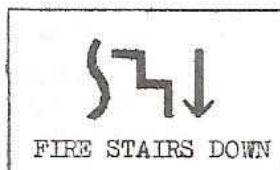
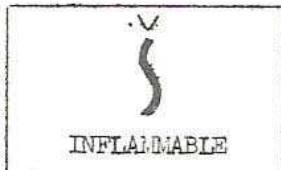
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EXAMPLES OF PUBLIC SIGNS



in French speaking countries

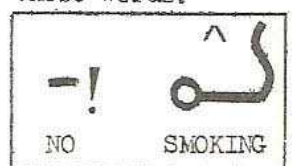
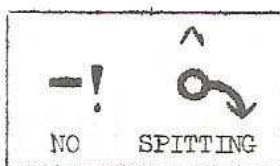
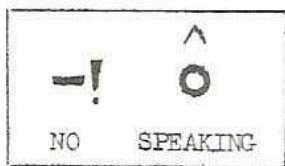
in Spanish speaking countries



The little marks on top, indicate verb, adjective, etc.

or: (In case of) FIRE, EXIT (here) or: (In case of) FIRE (use these) STAIRS DOWN

Do not write: WAIT HERE FOR TRAMS unless you use the proper symbols for these words.

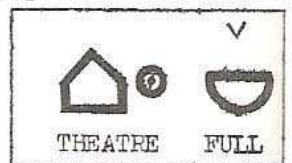
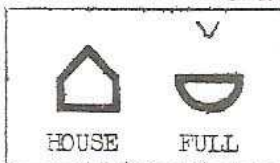
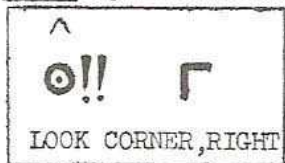


or: (Do) NOT ENTER
NO is symbolized by the minus symbol.

But do not write: SILENCE, which is symbolized by the ear symbol, instead of the mouth symbol as above.

or: (Do) NOT SPIT or: NO SMOKING (permitted)

FULL (see below) is symbolized by the outline of a full bowl.



eye symbol, ear s. or: LOOK OUT (bad) CORNER for THEATRE add eye symbol: SHOWHOUSE FULL

Why double page numbers? See p.7 and explanation at right →

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P I O N E E R S .

A LOGICIAN - PHILOSOPHER

in 1947

"I am firmly persuaded that if schools throughout the world were under a single international authority, and if this authority devoted itself to clarifying the use of words calculated to promote passion, the existing hatreds between nations, creed and political parties would very rapidly diminish, and the preservation of peace throughout the world would become an easy matter. Meanwhile, those who stand for clear thinking and against mutual disastrous enmities have to work, not only against passions to which human nature is all too prone, but also against great organised forces of intolerance and insane self-assertion."

Bertrand Russell (1)

A BIOLOGIST

in 1943

"Because natural science is the only existing form of human co-operation on a planetary scale, men of science who have to turn to journals published in many languages for necessary information are acutely aware that the babel of tongues is a social problem of the first magnitude.

We (must) make the language of science part of the language of mankind, and realise that the future of human reason lies with those who are prepared to face the task of rationally planning the instruments of communication."

Lancelot Hogben (2)

A PHYSICIST

in 1930

"Human thought requires an efficient method of symbolism such as no language yet supplies. If the keepers of our language maintain a die-hard attitude and succeed in preventing reasoned improvement the result will, I suggest be, that language will be less and less used for intellectual and rational purposes and relegated to an altogether inferior status as the symbolis of sentiment and small talk. All accurate thinking will have to be carried out by means of some other symbolism like that of mathematics.

This idea is also not new...."

Richard Paget (3)

A MATHEMATICIAN - PHILOSOPHER

in 1629

"One must establish a methodical system for all

all ideas similar to the methodically established order for the natural sequence of the numbers."

Rene Descartes (4)

A LINGUIST - TEACHER

in 1661 "I published...a Synopsis of a Philosophical Grammar and Lexicon, thereby showing a way to remedy the difficulties and absurdities which all languages are clogged with ever since the Confusion...In a word, designing not only to remedie the confusion of language, by giving a much more easie medium of communication than any yet known, but also to cure even Philosophy itself of the disease of Sophisms and Logomachies;"

George Dalgarno (5)

A BISHOP - PHILOSOPHER

in 1668 "If to every thing and notion there were assigned a distinct Mark, together with some provision to express Grammatical Derivations and Inflexions; this might suffice as to one great end of a Real Character, namely, the expression of our Conceptions by Marks which should signify things, and not words."

John Wilkins (6)

A MATHEMATICIAN - PHILOSOPHER

in 1679 "By the combination of these signs a system of true knowledge could be built up, in which reality would be more and more adequately represented by a definite sign and symbolized.

This true method of a Universal Symbolism would furnish us with an Ariadne thread, that is to say, with a certain sensible and palpable medium, which will guide the mind as do the lines drawn in Geometry and the formulas for operation in Arithmetic...

This would be of service at first for easy communication with distant nations; but if introduced also among us without however renouncing ordinary writing, the employment of this mode of writing would be useful in enriching the imagination, and in giving thoughts less surd and verbal than we now have...

In time everybody would learn the plan in youth, so as not to be deprived of the convenience of this figured character, and would speak in truth to the eyes, and would be very agreeable to the people, just as in fact, the peasants already have certain almanacs, telling them without words much that they ask...

(5)
I think these thoughts will some day be carried out, so agreeable and natural appears to me this writing, and it seems of no little consequence for increasing the perfection of our mind, and rendering our conceptions more real."

Gottfried Wilhelm Leibnitz
(7)

A SEMANTICIST - PSYCHOLOGIST

in 1930

"The so-called national barriers of to-day are ultimately language barriers. The absence of a common medium of communication is the chief obstacle to international understanding and therefore the chief underlying cause of war. It is also the most formidable obstacle to the progress of international science, and to the development of international commerce.

Charles K. Ogden (8)

A LINGUIST

in 1904

"Ideographic writing apparently possesses some inherent strength that makes it tend to triumph over (without entirely supplanting) phonetic writing, whenever the two are brought into competition in the same area.

In Europe such competition has scarcely taken place, except in the case of the symbols for numbers and a few other ideas; but there, too, the general law has asserted itself...

Ideographic writing will surely achieve the final victory over phonetic writing."

Basil Hall Chamberlain
(9)

I N T R O D U C T I O N A N D S U M M A R Y .

"Almost¹ everything new appears absurd. Absurdity is associated primarily with the unusual. And the story of the ridicule excited by the first umbrella should warn us against regarding the appearance of absurdity as having any relation to value."

C. E. Kenneth Mees (10)

The idea contained in this book may seem absurd to you. Yet it concerns a problem, which so far has defied all efforts, a problem which we must solve - sooner or later - or we may perish. We must overcome the language barrier. It's vital for our survival. Don't dismiss all this. It concerns you too. Hear the evidence.

BABEL

There are about 3000 languages (11) spoken on this earth, and we know how unwilling the human mind acquires even the rudiments of a foreign tongue, including Esperanto. The result: understanding is blocked.

The fact that all our school-learning of foreign tongues, aided by the best teachers, has, in most cases, proved an utter failure, may convince us that the mother tongue is like an irrepressible force. Even if Esperanto or another international language would be taught in all schools of the world, it would fail, because the 2,000,000,000 people in Europe, Africa, Asia, America and elsewhere, will go on speaking as their mother taught them to speak. Only a small number of people who are forced to make a living in a foreign environment will learn to speak another language, but among themselves again only the mother tongue will prevail.

But even within our own mother tongue or any other mother tongue, understanding is often blocked, because of a great amount of ambiguous, vague and even meaningless words.

THE REMEDY

In order to overcome the language barrier and misunderstanding, we must try a different way, which has already proved highly successful.

The scientists have invented symbols for international communication by reading and writing, which are understood in any language and which are clear, meaningful and non-ambiguous.

INTERNATIONAL SYMBOLS

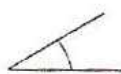
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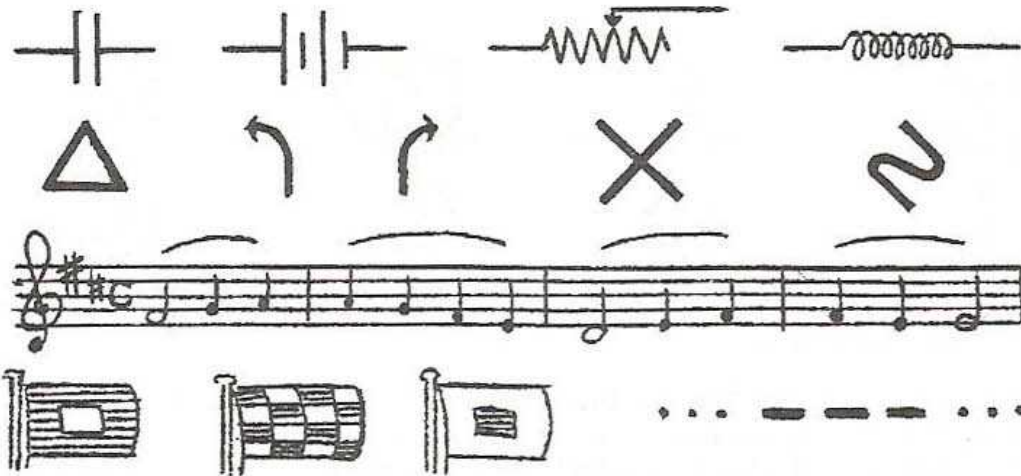
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2 H₂O = 2 H₂↑ + O₂↑H₂O + CO₂ ⇌ H₂CO₃

mm cm m km g kg sec lb

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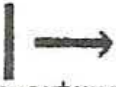






























A PRACTICAL SYSTEM

This book contains the first practical attempt to carry the idea further and to try to realise the dream of Descartes and Leibnitz of 300 years ago: simple, clear, non-ambiguous universal symbols for the whole range of language.

See how simple it can be. Follow the development of each symbol.

			
open	closed	entrance	exit
			
start	departure	approach	arrival
			
water	rain	steam	stream
			
emotion	happiness	sadness	love
			
earth	wall	roof	house
			
pen	to pen, write	man	writer
			
mouth	to speak	ear	to hear
			
language	bridge	translation	translator



letter



I



electricity



sun



telegram



life



telephone



to be (live)

BRIDGING THE LANGUAGES

The symbols above have - for practical purposes - the same meaning in different languages. As examples, the corresponding words of the five official languages of UNO are printed below. The study of these words is interesting. We see how similar some words in English, French and Spanish are, being descendants from Graeco-Latin. Russian is written in a different alphabet and the Chinese use a symbol writing, instead of an alphabet. This Chinese symbol writing - although being antiquated and complicated - is one of the main factors, which brought about the unification of 450,000,000 people of different races, speaking different languages, into the largest nation on earth.

<u>Semanto-</u> <u>graphy</u>	<u>English</u>	<u>French</u>	<u>Spanish</u>	<u>Russian</u>	<u>Chinese</u>
	open	ouvert	abrir	ОТКРЫТЫЙ	不關閉
	closed	fermé	cerrado	ЗАКРЫТЫЙ	關閉
	entrance	entrée	entrada	ВХОД	門口
	exit	sortie	salida	ВЫХОД	出口
	start	commence- ment	comienzo	начало	開始
	departure	départ	partida	отъезд	離去
	approach	approche	acceso	приближение	行近
	arrival	arrivé	arribo	приезд	例
	water	eau	agua	вода	水
	rain	pluie	lluvia	дождь	雨

SEE THE SIMPLICITY OF THE SYMBOLS IN COMPARISON

87
(7)

<u>Semantography</u>	<u>English</u>	<u>French</u>	<u>Spanish</u>	<u>Russian</u>	<u>Chinese</u>
♁	steam, vapor	vapeur	vapor	пар	蒸汽
≈	stream, current	courant	corriente	ПОТОК	水流
♡	emotion	émotion	emoción	ВОЛНЕНИЕ	情緒
♡↑	happiness	félicité	felicidad	счастье	愉快
♡↓	sadness	tristess	tristeza	ГРУСТЬ	悲哀
♡→	love	amour	amor	ЛЮБОВЬ	愛
—	earth	terre	tierra	ЗЕМЛЯ	地
||	wall	mur	pared	СТЕНА	牆
∧	roof	toit	tejado	КРЫША	屋頂
◻	house	maison	casa	ДОМ	房屋
/	pen	plume	pluma	перо	筆
↘	to write	écrire	escribir	писать	書寫
人	man	homme	hombre	МУЖЧИНА	人
人\	writer	écrivain	escritor	писатель	書寫者
◦	mouth	bouche	boca	РОТ	口
◌̇	to speak	parler	hablar	ГОВОРИТЬ	講話
∩	ear	oreille	oreja	УХО	耳
∩̇	to hear	entendre	oír	СЛЫШАТЬ	聞

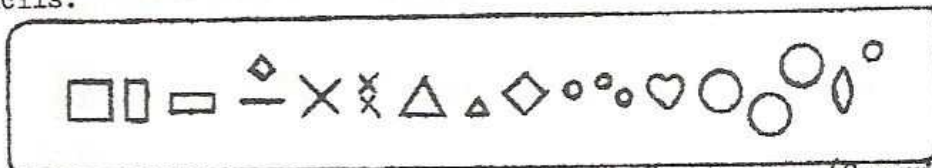
SEE THE SPACE SAVING OF THE SYMBOLS IN COMPARISON

<u>Semantography</u>	<u>English</u>	<u>French</u>	<u>Spanish</u>	<u>Russian</u>	<u>Chinese</u>
☉	language	langue	lenguaje	ЯЗЫК	語言
∩	bridge	pont	puente	МОСТ	橋
∞	translation	traduction	translacion	перевод	繙譯
∞∩	translator	traducteur	traductor	переводчик	譯者
☐	letter	lettre	letra	ПИСЬМО	信札
⚡	electricity	electricité	electricidad	ЭЛЕКТРИЧЕСТВО	雷
☐⚡	telegram	telegramme	telegrama	телеграмма	電信
☉⚡	telephone	téléphone	téléfono	телефон	電話
↓	I	je, moi	yo	Я	我
○	sun	soleil	sol	СОЛНЦЕ	日
⊙	life	vie	vida	ЖИЗНЬ	生命
⊙	to be (live)	être(vivre)	estar(vivir)	быть(жить)	存在(生存)

These are not specially selected examples. The book proves that the similarity in meaning holds true for other words—even more: the symbol shows at a glance what is meant, much better than many words can do.

HOW TO WRITE IT

It can be written by hand or nicely drawn with the aid of a specially cut stencil to be used like the ordinary draughtsman stencils.



(Copyright)

There is even a typewriter for it.

THE TYPEWRITER (see also pp 139ff and 226ff this edition)

It can be typed on a specially adjusted typewriter of ordinary size. The first set remains unaltered (for names, special or international words, etc.) Herebelow is the usual arrangement:

2	3	4	5	6	7	8	9	0	'	
q	w	e	r	t	y	u	i	o	p	?
a	s	d	f	g	h	j	k	l	()
z	x	c	v	b	n	m	,	.	-	

The second set (which usually contains the capital letters) contains the geometrical lines for the composition of the symbols

□	^	v	>	<	|	|	○	○	∪
○	♡)	∪	∩	∩	∩	∩	()
/	\	/	\	/	\	/	\	/	\
-	-	-	-	-					○

(Copyright
1949 C.K.B.)

HOW MANY THOUSANDS OF SYMBOLS

are needed for ordinary communication? Believe it or not - only about 100 symbol elements, which are shown in the next chapter.

About 20 of them are already internationally used. You find them on most typewriters. They are known to children of school age.

About 50 of the rest will be recognized by children below school age. These symbols follow the outline of real things of our world. The rest is made up by special outline symbols. Most symbols are almost self-explanatory.

THE FIRST UNIQUE ADVANTAGE

There are no foreign words, no queer pronunciations, no complicated grammar. Everyone reads and writes in his or her mother tongue, be it Oxford English, Eastend Cockney, Portuguese or Urdu.

A word, a warning, a notice, a letter, a report written in semantography could be read in English, Spanish, Russian, Chinese, French, or any other of the 3000 languages spoken on this planet.

BUT HOW ABOUT SPEAKING ?

The peoples of this world do not roam the continents. They usually stay at home and speak only their mother tongue. They read books, and newspapers and occasionally write a letter. Interlinguistic communication is mainly carried on by reading and writing. Only very few persons venture over the boundaries of their home country and find it necessary to speak a foreign tongue. The learning of foreign languages in school (even compulsory and including Esperanto) has mostly proved a failure. The mother tongue seems to be an overwhelming obstacle.

Nevertheless, once semantography is known and used by many people a set of international words could be agreed upon, based on English words (Basic), and other words based on Greek roots (Interglossa) and Latin roots (Interlingua) or mixed roots (like Esperanto). With these international words and following the rules of semantography a kind of spoken language could be established - as a travelling aid only.

PEOPLE CAN SPEAK BUT CANNOT WRITE.

75% of the earth population or about 1,500,000,000 people are illiterate. They can't read and they can't write. The languages of the primitive people are split up in thousands of dialects, which defy alphabetical phonetical standardisation.

The symbols of semantography are in the main almost self-explanatory. They show the outline of things. They would be an excellent medium to educate those people. Besides a primary textbook showing pictures and the symbols could be used in different parts of the world, for any language.

A PRACTICAL TOOL ONLY.

Semantography offers no competition to any national language and to any national literary and poetical endeavours. Semantography should be used only as a practical tool for international communication, especially in science, industry, commerce, traffic and last, but not least, to enable one to recognise the fallacies of many words.

This practical tool should interest everyone.

- THE SCIENTIST for international scientific communication; for a world-wide exchange organisation of short reports on scientific research; for dissertations and information without translation, etc.
- THE DOCTOR for the possibility to correspond with other doctors in other lands, speaking other languages; for prescriptions and labels on medicine bottles etc.
- THE TECHNICIAN for scientific and industrial communication; for standardisation; for international symbols for and on industrial products instead of multilingual instructions; for technical dictionaries, etc.
- THE TEACHER for the teaching of the meaning of words; as an aid for the teaching of grammar, logic and foreign languages, etc.
- THE MISSIONARY for the teaching of the 1,500,000,000 people (75% of the worlds population). Besides, semantography leads to a Universal Bible (see page 597).

- THE CIVIL SERVANT for handling the multilingual problems in traffic, postal and any other service and administration, in towns and countries with a multilingual and illiterate population; for international signs on highways, railways, in stations and ports, on trains, ships and airplanes; for identity cards and passports, for signs on public and private buildings, theatres and cinemas, concerning fire protection and traffic, etc. etc.
- THE FARMER He was one of the first to use international symbols. "Peasants" remarked Leibnitz 300 years ago, "already have certain almanacs, telling them without much words much that they ask": sunrise and sunset, full moon and new moon etc. Semantography could be used for directions on seed packages (see example on page 108 for agricultural reports and research stations etc.; for an all out drive on a planetary scale to produce cheap food in abundance and fill all bellies, the primary factor for peace.
- THE NEWSPAPERMAN for enlarging the scope of his paper; for a caption beneath pictures, readable in any language; for summaries for foreign readers.
- THE BUSINESSMAN for radiophotographic cables without coding and decoding in other languages; for business correspondence with foreign countries; for trade agreements without ambiguous terms, thus avoiding translation, controversy and doubt later on; for international invoices and forms; for banking, for international transport, customs etc.; for international labels and classification on merchandise, for international price catalogues, for advertising in multilingual countries, for offices and shops catering to multilingual customers, etc.
- THE INVENTOR for an innovation long overdue: an international patent specification, the necessary basis for an international patent law and an international patent office, as already achieved in part for trade marks and copyrights. This should put an end to the present hopeless situation for inventors who have not the money for the endless fees. The result will be a great stimulus to inventive work, instead of present days discouragements and hardships.
- THE STUDENT for an aid in studying any subject on foreign Universities, etc.
- THE STAMP COLLECTOR for correspondence and exchange of stamps with collectors in any other country.

(12)

THE BOY SCOUT and GIRL GUIDE for correspondence with boys and girls of any country in any language. Children scribble already many of the elementary symbols.

ANY INTELLIGENT MAN and WOMAN, hand or white collar worker, in town or country, interested in a fascinating pioneer work, by corresponding with people in foreign lands and thus collecting valuable data for the forthcoming textbooks in all countries, to be issued in co-operation with the national branches of the International Society for Semantography.

WHY SEMANTOGRAPHY?

This word is formed from Greek roots. Graphein means to write, sema a sign, semanticos to signify, semantics the young science of the significance (meaning) of words (and their influence on human behaviour).

Words can exert a terrific influence on our lives. The first, and even more, the second world war was unleashed by words, slogans and propaganda. The "cold" world war, waged now, is mainly based on "ideologies", muddled ideas, expressed in muddled words, which have different meanings (significances) for different persons.

Semantography is a new writing, which shows the meaning of the word much better than phonetic writing can do.

THE CHEMISTRY OF WORDS.

Believe it or not - the symbols of semantography act like chemical symbols. They reveal the inherent structure and in certain cases the inherent danger of a word. Slogans and statements translated into semantography become exposed - to a certain extent, but enough for the watchful man - trash becomes visible, high-sounding words with vague meanings are demasked and meaningless words are almost impossible to write in these geometrical symbols, which are nearer to the structure of the real things and therefore "truer" in meaning than words in phonetic writing and speaking. Words are fleeting sounds only. Even if written down in phonetic writing, they change their pronunciation and their meaning incessantly in all languages.

THE SECOND UNIQUE ADVANTAGE.

Semantography gives you an insight in the limitations of words. It helps you to recognize ambiguous words. It keeps your head cool amidst the welter of political slogans, which mean one thing to one person and another thing to another person. It helps you to keep your temper and to make you immune against the utterances of others. In short: it helps you to avoid the disastrous influence of some words and consequently it brings you less suffering and a richer life.

FOR PEACE.

We need peace within our own family and within the family of

of nations. Bombs can hurt us, but words can hurt us too. And such missiles are dropped daily at breakfast or at work, in the home and the workshop and most of them find their mark and cause misery which can be avoided, once you know how.

THE POISON.

Language, carelessly handled, seems to be a terrific poison. It can poison the relations between father and son, husband and wife, foreman and worker, nation and nation. And it can poison and consume millions and devastate whole countries.

To handle such poison we need a chemistry of language and we need symbols, similar to the chemical symbols. Here they are.

How they work cannot be said in a few summary words. The few symbols shown in the beginning do not contain disputed terms such as: what is a democracy and what is superstition, what is scientific and what is unscientific, what is a crackpot idea and what is over-simplification (as many may judge this book). You have to read the book in order to learn how to recognize the basic meaning of such terms from the geometrical symbols. They reveal the inherent structure and the inherent danger.

PHYSICS AND LANGUAGE

Not only chemistry, but physics (a slightly different perspective) plays its part too in bringing understanding of the working of language. In some chapters it is shown that primitive man, in devising words to describe the world around him, must have had some subconscious hunch about the principle of relativity, the union of space and time, the quantum theory and the conversion of mass into energy and vice versa. Far fetched and silly as this may seem, at least it makes no drab reading. Judge for yourself.

There is a new grammar devised in this book to give a few rules for the construction of sentences in semantography and to bring home the basical meaning of words in any language, anywhere on this earth. Consequently the new grammar is based on chemistry, physics, biology and psychology. Nevertheless it seems so simple that it can be taught to children. See for yourself.

THE VISION

Teaching semantography to children, who already scribble many of the symbols, may have the most far reaching effects. Most of us have forgotten the suffering, the agony, the tears which children inflict on each other by words, ('you silly ass, you sissy, you outcast') and which continue when we grow up ('you pernicious person, you idiot, you cut-throat').

NATION, DEMOCRACY, RELIGION AND OTHER TERMS.

There are some controversial chapters to be sure, but they could not be avoided. If semantography is claimed to be a "truer" writing than phonetic writing, then it must prove its worth, where

where the need is most desperate.

Applying mathematical and chemical reasoning to the construction of a symbol for instance for nation reveals the distressing fact, that most people do not know what they mean by nation and if they do believe that they know, everyone has just a different opinion about it.

The same applies to other controversial terms.

German war slogans written in semantographic symbols reveal - in geometrical lines - the tragedy, which unscrupulous exploiters of language have brought upon a nation.

The word democracy, translated from the Greek means people's rule. But we know now that this may mean almost anything. The word written in symbols reveals quite a complicated symbol formula, similar to a complicated formula of a chemical compound.

Comparing the formulas for United States, British, Russian, French, Nicaraguan or any other democracy reveal a similar structure to be sure (with elections and all that) just as the structure of the chemical formula of say various benzene derivatives are similar. Every boy and girl who learned some chemistry will recognize the formulas of chemicals with similar structure.

But there are little differences. Instead of an H (hydrogen) atom at a certain place, there is an OH (Oxygen-Hydrogen) group. In another formula, the H (Hydrogen) atom is replaced by another group, for instance the NH₂ (one atom Nitrogen and two atoms Hydrogen) group. But apart from these differences, the formulas look very similar.

As said before, young boys and girls are taught in school to be aware of these differences in chemical formulas. So, it can't be difficult. And they realise quickly that differences in the formula means differences in the properties.

The properties are mainly determined by the outer groups. In formulas of certain chemicals these outer groups like OH and NH₂ are called radicals.

In symbol formulas such outer groups too determine mainly the properties of the whole compound. A secret police group, attached to the structure of a formula for a democracy, alters radically the properties of that particular democracy. Now this is not a metaphor only. The group symbols show unmistakably the outline of the real things. It can't be overlooked.

To measure the properties of chemical compounds the scientists measure with instruments and apply yardsticks operating with mathematical figures. The same reasoning may be applied to semantographic formulas. The amount of children behind school windows and the amount of political delinquents behind prison windows in percentage to the whole population give a fairly accurate measurement of certain properties of a 'democratic' compound. You can't argue whether 5 is bigger than 10 or not.

All this may seem silly, but in view of the fact, that we can't agree, what "is" a democracy and what not - and that the only alternative is to revert to bombs - we may just as well try to apply the reasoning of the scientists who are trained to handle "matters". In any case, a chart hung in the classroom or the community centre, showing the formula of democracy - as contemplated in this book - may have some effect. Firstly it can be read in any language and even

even by illiterate people when told about it. Secondly, it shows the real things, men women, children, law books, schools, prison bars, etc. all in geometrical lines true to nature. It may work perhaps where ordinary language has failed utterly.

As to the meaning of religion, the recent mutual wholesale butchering of millions of adherents of two great religions have shown again the need for the education of such people who can't read and write and who can't understand each other and who don't know what religion means.

Scientists have expressed some "laws of nature" in symbols, which have the same meaning in different languages and in different countries. If we try to write in semantographic symbols some of the "laws of ethics" (which is one of the many aspects of nature) we arrive at formulas which have a similar meaning in different languages and in different religions. Such a page written wholly in semantography and pasted into all the prayerbooks of any creed in any language, may have some effect - perhaps. In any case, it may tell us that we are one community - on paper at least.

Far fetched, as all this may seem, from simple symbols as displayed on highway road signs, it tends to show that the system of semantography can cover the whole range of language.

HOW TO START FIRST

We must start first with symbols already in use, symbols which may mean life or death to millions of people. We need an international standardisation of already existing highway danger signs for motorists. Some such signs look similar, some differ greatly and may lead to misunderstanding and harm. We have no international symbol for SCHOOL, HOSPITAL, ONE WAY TRAFFIC etc. The basis of standardisation should be semantography, which employs many of the international symbols. Besides, the same symbol elements would be recognised when employed in theatres and cinemas to indicate EXIT, FIRE ESCAPE, HYDRANT, etc. Similarly on public and private buildings signs for IN, OUT, NO SMOKING, ENQUIRIES, etc. should be displayed with the words in the native language underneath. On trains, ships, stations, ports, etc. similar signs may be put up for EMERGENCY BRAKE, LIFE BELT, TO THE LIFE BOATS, DANGER, TURN HANDLE, COLD, WARM etc. etc.

The symbol elements are almost self-explanatory. The population reading the native words underneath the signs, would soon recognise the symbol elements anywhere on other signs in their own or in a foreign country. And then they would have become accustomed to the 100 important symbol elements and would have no difficulty in grasping the meaning of other combinations.

Meanwhile scientists and teachers of the universities and the great scientific foundations may examine the whole system and may require the author to expel doubts, which this first book (which is not a text book) may invoke. Test classes may be instituted and the pitfalls recognized and dealt with, etc. etc.

BUT WILL IT WORK?

Why it works beautifully already in many strata of life. It

It works in mathematics which we all employ. It works in chemistry, physics, geometry, electrical work, radio, etc. It works with writing (, . ; : ? ! () " ' & % -) and it works with music. It works on the highroads and on the sea lanes. We employ symbols everywhere and we have only to carry the idea further to arrive at a complete international time table, readable in any language, complete international symbols in postal service, on bank counters, in restaurants and hotels. Believe it or not - there is even an international menu card, readable in different languages, a practical and handy tool to avoid present disappointments and indigestions of those who go on travel.

Yes, it would work beautifully - because it works already. What we need is that someone should give a start to semantography and that the others should co-operate.

CO-OPERATION.

In 1855 the London Board of Trade appointed a committee to formulate an international code of flag symbols for communication at sea. This was done because before that "ships belonging to the same nation were often unable to converse owing to the fact that different codes were in use on board of them. The confusion of tongues at the tower of Babel was insignificant in comparison with that which hitherto prevailed in transmitting messages at sea. Now the ships of every nation employ the same code." (12)

But how was this achieved? There were no international conferences, no proposals and counter proposals and insane self-assertion of some delegates. One great nation appointed a committee of experts who devised a code better than the existing and wider in scope. Very quietly all the other nations adopted it. Why? Because it was much simpler than to stage a counter system. And because the ships of a great nation employed it already. And because the symbols could be read in any language.

If one great nation or its leading Universities and scientific foundations adopt semantography, the others would follow because they would already benefit by the scientific reports written in semantography, by its industrial applications, its use in commerce and traffic. Just imagine that some communication might come, say from America, which a Bulgarian can read in Bulgarian and a Hindu in Hindustani. And imagine the miracle if they could write something in Bulgarian or Hindustani which an American could read in his language. Why, the nations may clutch at it.

HEAR THE AUTHOR

I am a science lecturer by preference and an industrial research chemist by profession. Twenty-five years of hard earned practical experience in business enterprises have taught me to drop a thing which appears not to be practical. I am a practical man, a factory worker and an inventor. And I know that an inventor can't look on his brainchild with objective eyes. When this idea got hold of me and I thought I had worked out some sort of a system, I hired a man, a language teacher, violently opposed to the whole idea. His job

job was to fire as much criticism as possible at my symbols, to attack me with difficult notions, untranslatable sentences, grammatical monstrosities.

He drove me almost mad for nearly two years, five evenings a week. But the idea and the system emerged undamaged. Otherwise, I would have dropped it, as only a practical man can discard something unpractical. But to all appearances, it works, it seems practical and simple. I believed that I had got something; something which could be of some help to people. Then I couldn't drop it. I had to work on it for 6 years, thinking of it during my business work in the day time and during the sleepless hours at night. I had to write this book.

As said before, I am a practical man. I can make money and I have made money. All right! But now I have had enough of making technical gadgets, which have apparently so little influence on our well being.

If the world seems to be destined to go to pieces by means of chemistry, we chemists have some obligation with regard to reversing the process. If chemical reasoning has helped the doctors in their fight against bodily diseases, the same chemical reasoning may help them in the fight against mental diseases. War, fight, quarrel and hatred are symptoms of a mental disease, say the psychiatrists. And apparently infection takes place by words.

Now this is not a nice metaphor only. There is something more in it.

THE UNEXPECTED BY-PRODUCT.

Studying the oldest "picture writings" of the cave man, I came across something almost unbelievable. Then I found out that a few scholars had known it before, but nobody listened to them, because as we all think we know for sure 'you can't change human nature!'

The oldest pictorial writing on caves and stones (dating back approximately 30,000 to 50,000 years) show decisively that war among the human species was absent. Those "documents" show animals and boasts about animal hunts which human hordes need for a living. Nowhere in those distant ages do we find a written record showing a man raising an arm against another man. But then - something must have happened, because since about 10,000 years ago or less, most records on stone are directly or indirectly connected with boasts about wars and victories. The market places are full with them, in ancient Babylon as well as in modern Rome.

Now this idea is crazy, absurd, unbelievable, ridiculous. But see for yourself and read for yourself.

"The prehistoric age, which extends over tens of thousands of years down to about 5000 B.C. enjoys a fairly pacific reputation."

W. P. Paterson (13)

"It is doubtful, if serious war was known in Europe until the Bronze Age was established."

C. F. Scott (14)

The interpretation of those earliest pictorial writings means nothing more nor less than, that war and human strife must be only a recent "epidemic". Human hordes may have dwelled in peace with

with each other for hundreds of thousands, even perhaps for millions of years.

Yes, we may be quite sure about this, because war among the same species is unknown in nature. Lions don't kill lions and wolves don't kill wolves. They will howl through the wintry forest, ravaged and mad by hunger, but no wolf will attack a living fellow brother wolf. It seems to be an 'iron law of nature'. Even man did not attack man, until recently - something happened, an epidemic outbreak, a disease, attacking the highest developed brain cells, the brain of homo sapiens.*

We don't know what happened about 10,000 years ago (or at some earlier stage). It may be a cosmic disturbance, a change in the atmosphere, cosmic rays, radio activity - we don't know. But we can find out. We have now the scientific method. Scientists have stopped some epidemics effectively. Scientists have raised the average life of human beings considerably during the last 100 years. Scientists can find out what makes a human being gentle and what makes him ferocious.

Laughing gas N_2O makes us laugh, Oxygen O_2 in greater doses changes our feelings and thoughts. $C_2H_5.OH$ commonly called alcohol gives us an elated feeling and a hangover afterwards. In greater doses it removes all mental barriers of moral, conscience, law, etc. and can make a killer from a gentle person. In still greater doses it kills. And so on with other chemicals. Chemists and doctors can change 'human nature' and great changes have taken place on our earth crust. "Catastrophism" is an acknowledged scientific theory in geology and in other sciences. Some historians believe that great empires have collapsed in wars and miseries through climatic changes. Geologists believe that during part of the paleozoic and mesozoic ages, when giant creatures (with exceptionally small brains) roamed in giant forests, the amount of carbon dioxide CO_2 in the air must have been higher (perhaps through volcanic activities) than it is to-day (about 0.04%). CO_2 is a good fertiliser. The relationship of all life on earth, between plants, animals and man depends on the proper interchange of CO_2 . In greater doses it is a poison.

In short: scientists can find out what has happened and what can change human brain matter.

THE MESSAGE FROM THE CAVE MAN.

The meaning of his "picture writing" is clear: "we didn't fight and kill each other!"

Then hatred and war must be the symptoms of a recent mental perversion, an epidemic, broken out some 10,000 years ago or even

* Some species of ant. (not all) wage war on the same species. But we may assume that ants have - after the human species - the highest developed "brain matter", (although totally different from man). Ants use agriculture; they raise crops and they rear cattle. They use tools. If a cosmic disturbance has happened, it may have attacked their "brain matter" too.

earlier. This conviction must be a tremendous stimulus for scientific research to stop the plague effectively.

Modern psychologists have realised that it is a disease and that it is their responsibility to stop it. In the last chapter reference is made to quotations of a great psychiatrist.

THE ROLE OF SEMANTOGRAPHY.

Semantography may prove a practical tool for

1. interlinguistic co-operation of scientific research
2. semantic (words and human behaviour) treatment and education.

A WILD GUESS.

This interpretation of the oldest "picture writing" of man, may be termed a "wild guess". All right! But "wild guesses" are the rule about most of those oldest archeological finds. And this "wild guess" is based on a "picture writing", which means that it can be read in any language, even in the languages of to-day. It should interest all able bodied men and women interested in peace. "So you are not interested in politics, my friend", said Arthur Schnitzler, "but politics is interested in you - all the time, and quite of a sudden - you get your call-up to arms."

Here at last is a basis for research to attack the evil WAR at its root. The message from the cave man says unmistakably that human nature has been changed disastrously and only recently. It's only a temporary matter. And it is all up to us to reverse the process.

A THRILLER

This is what this book could be - if you want it to be one. What you need is a little diligence to overcome some drab chapters, containing the evidence (just as with a thriller). Don't glance through the book and dismiss it. Read it until those little symbols become to you as meaningful as 1 2 3 is to you now. You may profit by it. Words will lose their harmful influence, whether in work or leisure, in business or politics.

And you will enjoy it, if you use a little imagination and a sense of humour and prepare to overlook generously the many shortcomings of which no one is more aware than the author.

This idea is like a newly born baby. It needs care. And it can live if you care.

THE MESSAGE FROM THE PIONEERS

On the first pages Bertrand Russell, Lancelot Hogben, Robert Paget, Rene Descartes, George Dalgarno, John Wilkins, Gottfried Wilhelm Leibnitz, Charles K. Ogden, Basil Hall Chamberlain have been quoted. If you haven't read that chapter, read it now. Most interesting is the fact, that the advocates of such a new kind of

of symbol writing realise its great semantic effect:

"to remedy...the absurdities which all languages are clogged with..."
"to cure even Philosophy itself of the disease of Sophism"

George Dalgarno 1661 (5)

"a system...in which reality would be...more adequately represented..."
"a medium, which will guide the mind as do the lines in Geometry..."
"in giving thoughts less surd and verbal than we now have"
"for increasing the perfection of our mind, and rendering our conceptions more real."

Gottfried Wilhelm Leibnitz 1679 (7)

"Human thought requires an efficient method of symbolism such as no language yet supplies..."

Richard Paget 1930 (3)

Let us end this summary with a further quotation from the physicist Robert Paget (3):

"James Jeans has shown us, that the human race is still at the very beginning of its career on earth. Let us take heart, therefore, casting off the superstitions that bind us to the past, and welcome the help of science to the perfecting of human speech, for there is much need for clear thinking in the future.

Over all is the fact, - which we are just beginning to realise - that our own (and all other languages) are but the babblings of children and that it is only by a systematic and conscious effort that we can hope to attain unity and an approach to perfection in the future.

If we succeed, the English speaking races may well fulfil the words of Genesis, which for our remembrance, I will quote once more:

"And the Lord said: Behold, the people is one and they have one language - and now nothing will be restrained from them which they imagined to do".

THE MESSAGE FROM THE UNIVERSE

The telescope and the microscope reveal the purposive force in our universe, in the nebulae as well as in the crystals: to create order out of disorder.

disorder.

If the crystals can do it, we should be able to do it even better. And if there are disturbances - we, the unique and miraculous conglomeration of molecules, called homo sapiens (man who knows) have been created with brain cells to find a "clear solution" for the "crystallisation" of our ideas to create order out of disorder.

It's all up to us.

Sydney, January 1948.

C.K.B.

Postscript. Don't forget the umbrella!
Remember, it was once considered a crackpot idea. Don't judge now. Read the book, the whole book!

THE 100 SYMBOL ELEMENTS

THE 100 SYMBOLS versus THE 26 LETTERS

"That language ranks highest which goes farthest in the art of accomplishing much with little means, or in other words, which is able to express the greatest amount of meaning with the simplest mechanism."

Otto Jespersen (24)

Semantography is proposed as a practical tool, as an auxiliary writing for communication purposes between different nations, and as a device to recognize relative and vague meanings. Now, critics may come forward and point to the "simplicity" of the 26 letters of the phonetic alphabet, against the "complexity" of an ideographic writing. They may point to the "most cumbersome writing of the Chinese. It may seem "most cumbersome" to a Westerner, but not to a Chinese. Any Chinese father who can afford to let his little boy go (not to the rice fields) but to a school, will see with delight how the boy picks up reading Chinese characters, even quicker than they usually pick up Western writing. You will find an institution in China, without parallel in other countries: street libraries. In almost every street of Shanghai you will see an old Chinese establishing his business at a corner, or the wall of a house. He puts up a shelf, stacked with the most marvellous fairy tales and comics, Chinese style. And around the shelf, on stools provided by the proprietor, sit his customers, children between 5 and 10 years of age. They have decided to turn their penny not into food for the palate, but food for the mind. It was for me a constant source of wonder, seeing these children consume ravenously those queer and cumbersome Chinese character, and to preserve the memory of this beautiful sight, I made a movie of it.

Then I hired a Chinese teacher and began learning to read and to write. Soon the complexity of the characters vanished, I could take in at once a complicated character in a fleeting glance, just as I could take in complex chords from a music sheet when playing

But then I revolted, I found many Chinese characters unnecessarily overloaded with archaic forms; the outline of the real things almost obliterated; a great many characters indicating sound and meaning in a queer way; all in all an almost hopeless jumble, carried over the thousands of years into modern time.

Yet, this cumbersome and complicated writing works amazingly. You will find the news-stands overloaded with big dailies, and magazines on anything, including advances in science. You will see the Chinese typewriter operating with about 1500 or more types, yet one pressing of the key, types a whole word, and a business circular letter sent to different parts of the country, can be read in any tongue of China, although the Chinese from the South cannot understand a Chinese of the North.

Then you make an unbelievable discovery. A grown-up Westerner may have difficulties at first to read Shakespeare without a commentary on the obsolete words. Yet, Shakespeare's writing is only about 250 years old. The poetry and prose of, say 700 years ago, is almost hopelessly lost to us. But a poem in Chinese characters, written more than 2500 years ago is still readable in a modern tongue, no, in any modern tongue of China. And the beauty and fragrance of this old poem is grasped immediately - without translation - because the reader sees directly and vividly the moon, the bamboo leaves hanging silently, the still waters, and he sees even the drops of blood of his heart woven into the picture.

Then you make another unbelievable discovery. Whether you are an Englishman, or a Frenchman, or a man of any other country and language, once you ^{have} grasped the meaning of Chinese characters (without necessarily learning how to pronounce them in Canton, or in Shanghai or in Peking) then you can read this old poem in your own mother tongue - no, not only in this, you grasp nature directly. The outline of the moon does not conjure up in your mind the letter combination m-o-o-n, but directly that silvery, luminous, beautiful, heavenly thing.

Once you fall thus into the spell of an ideographic writing, other unbelievable things of China become clear to you. How did it come that so many tribes and races with many diversified languages have been unified into one, the largest nation on earth? How did it come that the many peoples who invaded China, became absorbed, instead of impressing their way of speech and thought on the conquered people, as the Romans and the Normans did?

Western scholars on China will tell you that the ideographic writing was the unifying factor; a writing independent of any language; a writing which the conquerors learned to read in their own mother tongue; a writing which preserved the writings of the scholars thousands of years back, and made them readable as if written yesterday.

Now, just think for a moment that different musical notations would be established in different countries. Today you can read the musical writing of any composer, be he Beethoven, Mozart, Tschaiakovsky, Debussy, Puccini, Elgar, simply because one ideographic writing has been accepted by the whole world.

But of course, we could imagine different national notations with translations etc; we could even imagine different mathematical symbols in different countries, but somehow it is difficult to imagine different national geometrical writings, which follow the outline of the real things. To the students of old, the students of today and the students of 100,000 years hence - a cube, a pyramid and a cone has been and will be drawn in similar lines.

Well, semantography is supposed to be an ideographic writing and in the main also a simplified geometrical writing. It has been ^{somehow} devised according to our present knowledge in chemistry, physics, biology and psychology. To compare it with the vagaries of an age-old naturally grown ideographic writing such as the Chinese, would be unfair to the latter. But to compare it with an alphabetical writing would be even more unfair. A geometrical ideographic writing can do things which an alphabetical writing never can. To use an analogy, it would be unfair to compare the usefulness of a carriage to the usefulness of an airplane. An airplane can bridge mountain barriers and waters. To transfer a carriage over a water, which separates lands, you must do some transferring, which in Latin is termed translatio. On the other hand, a carriage has its usefulness in the different lands.

Now the preposterous boast on the title page: 100 symbol elements to overcome Babel will have to be proved. Only 100 symbol elements seems an unbelievably small number. But it will be shown, that much less than 100 symbol elements are necessary - provided that you extend to this analysis the same benevolent attitude, which we usually display towards our alphabet: Only 26 letters do all the tricks. But do they?

Let us imagine Prof. Higgins, expert on phonetics, the Pygmalion of G. B. Shaw. An illiterate Eskimo enters. He wants to be taught to read and pronounce perfectly - an English newspaper. Prof. Higgins makes him acquainted with the phonetic symbols A B C D E F etc. It's easy in the beginning. 26 letters and 26 different sounds. But soon it turns out 26 letters and more than 260 different sounds. The letter A is to be pronounced in more than 20 different ways. So it is with E and with I, and so it is with most of the consonants. C is to be pronounced ss or k or ts or tz. H is to be exhaled and sometimes to be ignored altogether. HUMAN is to be pronounced UMN. The Eskimo, who believed that these

sound symbols stand for a definite sound,^{each} learns with a shock that they stand for almost any sound and sometimes for no sound at all. KNOWLEDGE is to be pronounced NOLEG and so on with almost any word of the English language.

Well, we know what is wrong. It's - in the words of Shaw - "our wretched alphabet". And Prof. Higgins will tell you that there are, not 5 vowels, but 130 different vowels, and "they are all as different as A from B."

Now, let us suppose that Prof. Higgins - by an almost superhuman effort - succeeds in teaching the Eskimo the correct pronunciation of every word in the dictionary. In the end, our Eskimo is able to read The Times with the perfect pronunciation of a Cambridge don. But does he understand what he reads?

No. Prof. Higgins taught him only phonetics, not semantics, the meaning of the words. Our Eskimo would be much surprised to know that the letter combination FISH means that living thing, which he knows so well by quite another sound.

So we must realize that the pronunciation of a word and the meaning of it, are two entirely different things. And our disillusioned Eskimo would have to go through another training, even more strenuous than the first. And he would never complete this course, as we all know, who go through the same training all our life.

Now let us imagine that Prof. Higgins gets completely out of the hands of G.B.S. Higgins becomes a fanatic. Somehow he got control of the whole world and he imposes upon mankind the complete and correct alphabet. It is a list of about 200 to 300 letters, and each letter stand for one sound, and for one sound only. And he orders that everyone should write as he speaks.

Then something terrible would happen. A book printed in Aberdeen would be different from the same book printed in London. But even in London, Higgins is able to distinguish between the different dialects of two different streets. The same word uttered by two different flower girls would have to be written differently.

Well we know that G.B. Shaw wants nothing of the sort. In his own words: "A complete and exact phonetic script is neither practicable nor necessary for ordinary use; but if we enlarge our alphabet to the Russian size, and make our spelling as phonetic as Spanish, the advance will be prodigious." And we have full understanding of Shaw's plea, when we listen to the ridicule which foreigners pour out on English spelling. And we know, that some advances have been made already. In America they write THRU instead of THROUGH, and NITE instead of NIGHT.

But suppose we would have that new alphabet. We would not write KNOWLEDGE any more, but NOLEG, or with some new letters NOLIG. What would happen then?

Nothing sensational. The peoples in England, Scotland, Canada, the U.S.A. Australia, etc. would go on pronouncing it differently nawleg or noolig or naalitch. In one family the pronunciation does vary and would vary, even if we institute new letters.

And now we are coming to our discovery. Why are certain professors against a reform of spelling?

They say, that our writing is not more a phonetic writing; that pronunciation ^{shifts and} shift within 20 years, and a perfect alphabet instituted now, would be obsolete in 20 years. And they say that our writing is only partially a phonetic writing; in the main it is already an ideographic writing.

No matter how we write BUILDING or BILDIN, or else. The geometrical combination of these lines BUILDING conjures up that structure for human habitation in our mind. No matter how we pronounce the geometrical combination KNOWLEDGE. The picture of it conjures its meaning: the accumulation of experiences and learning.

And now we come to our conclusion. The peoples in London East End and West End speak a different dialect, so different as to be sometimes not understandable to both. The people of Harlem and Boston speak in other dialects, - but all of them can read the same newspaper. The alphabetical symbols stand only faintly for the sounds; they stand in their various combinations for various ideas. For the peoples of the world, who speak English, or Anglo-American (as it is now called), their writing is already an ideographic writing - somehow similar to the Chinese ideographic writing in effect - it can be understood by people, who often can't understand each other in speech.

And if you look into the writing and pronunciation of other nations you will find the same state of affairs. The literary French pronunciation is only one dialect of the many, spoken in France. Only a fraction of the French people speak that literary French. And we know how far the French spelling is from the actual pronunciation. But the French people from different parts of the country, speaking different dialects, can read the same newspaper and the same book.

And so it is with the writing of Italian and Spanish, and Russian, and other languages. It is only partially phonetic. In the main - it is ideographic.

We can imagine a simple man, somewhere in the business, who speaks a kind of English and has learned a bit of reading. The letter combination HOUSE would mean something to him, but the combinations MANSION, MANOR, COTTAGE, BUNGALOW may mean nothing to him and he wouldn't even know how to pronounce it correctly. But so would a Frenchman or a Spaniard fail to pronounce it correctly, least to get the meaning, although they all use the Latin alphabet, composed of 26 letters.

Now let us compose other letters, "line letters" of a better geometrical ideography.



And with these "line letters" we could now write letter combinations, such as for instance



The meaning of this geometrical "word" may be guessed. It may mean a HOUSE, BUILDING, MANSION, COTTAGE, BUNGALOW or in French MAISON, or CASA or any other word in other languages conveying generally the same meaning.

And we can use the above 11 "line letters" to write down thousands of other "words". So, if critics point to the "simplicity" of the 26 letters of the Latin alphabet, we may point to the "simplicity" of the 11 letters of our geometrical "alphabet". We know now, that comparison leads nowhere, because both writings have different advantages. Alphabetical writing is used all over the world, and it will be used in ever increasing editions of books and newspapers. Besides the alphabetical letters, we have already a series of ideographic letters such as 1 2 3 4 5 etc. and now we may add - as an auxiliary tool only - a few other symbols and symbol elements for two purposes:

- (1) to write international reports in science, industry, commerce, etc. whenever we need to bridge the language barrier, especially in countries with a multi-lingual population.
- (2) to recognize words with relative and vague meanings.

This only is the purpose of semantography, and with this in mind we shall now study the list of the 100 symbol elements, and how they are used. In the column on the right side we shall put in the number of symbol elements and we shall then add up the total.

THE 100 SYMBOL ELEMENTS

										<u>Total</u>
The first elements are symbols which are already in use in most parts of the world. Every boy and girl who went through primary school will recognize them.										
<u>The mathematical numbers</u>										
1	2	3	4	5	6	7	8	9	0	10
These well known symbols form the first 10 elements of semantography. Now we know that we may combine these symbols in different ways to get different meanings.										
Combination examples: 123 is different from 321 in meaning.										
22 is different from 2 ² in meaning										
From these combination examples we learn that <u>different position of the symbol elements, and sometimes different size of the same element will indicate different meanings.</u> We shall use our symbol elements in different position and sometimes in different size to indicate different meanings.										
And now we shall add up the total of symbol elements we have learned										10

Total of symbol elements brought forward

10

Symbols for mathematical operations, etc.

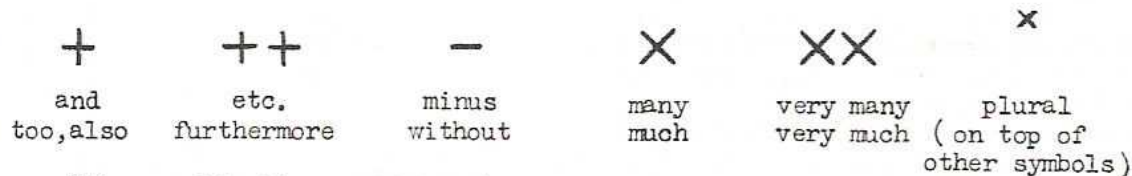


addition subtraction multiplication division equal relation

6

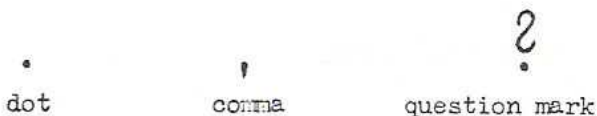
Combination examples:

The same symbols, written smaller in size, shall have the following meanings:

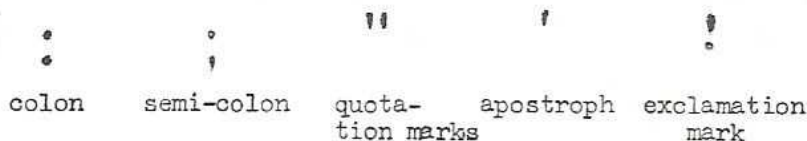


Other combinations will be shown in later chapters.

Interpunctuation symbols



Combination examples:



3

The arrow →

It is one of the oldest international symbols dating back to the cave man. In semantography it should denote a movement (action) in a certain direction. As we write forward from left to right, this direction should indicate



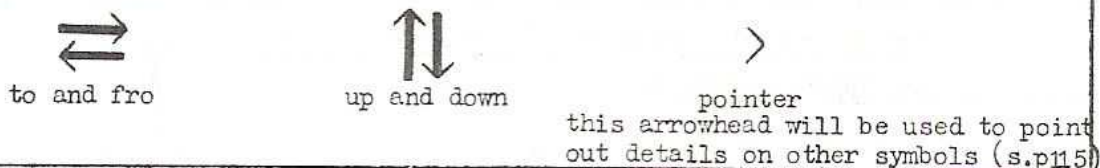
1

Now here is an important "grammar rule" of semantography taken from astronomy.

"In the spaces of the universe there is no direction favoured from any other direction." Forward has no meaning in empty space. It is a relative meaning, depending on a system of reference. Forward from where? and where to? A group of men facing different directions, will proceed forward in different directions, each man being his own system of reference.

This symbol, coupled with the symbol for metaphor, indicates advance, progress again a relative meaning. Man progresses - where from? - where to? From barbary into greater barbary or into less barbary. Wherever you see the arrow, you must search for the system of reference.

Combination examples:



this arrowhead will be used to point out details on other symbols (s.p115)


(26)

Total of symbol elements brought forward

Total

20

The symbol for medical service

 The rod of Aesculapius, Roman God of Medicine. An age-old symbol displayed on hospitals, pharmacies, allegoric murals, etc., etc.

We shall use a simplified outline, easily typable on our semantography typewriter. The symbol shall stand before any meaning connected with medical service. Combination examples see chapter p. 391 ff.




medical service

We could even dispense with this symbol, and use a combination indicating: help for sick

(see p. 400 and 555)

1

The symbol for money and business

 The rod of Mercurius, messenger of Jupiter, God of the merchants. An age-old symbol displayed on banks, business houses, bank notes, allegoric murals, etc., etc.

We shall use a simplified outline which shall stand for money, and in connection with another symbol for business in general. Combination examples see chapter p. 247 ff.



money

We could again dispense with this symbol and use instead a combination, indicating: thing for exchange.

1

The symbol for music

The outline of a note



indicating anything connected with

music


Combination examples in later chapters.

1

The oblique line which we use to cross out a writing

This writing to be crossed out

Combination examples:

 to cross out to blot out, eradicate destroy, extinguish, etc.



ruin house destroyed

= equal



not equal different

1

Total of well-known arbitrary symbol elements

24

S U M M A R Y

These 24 symbol elements comprise about one quarter of the 100 symbol elements of semantography. They are well known to any boy and girl with primary school education and to anybody in the "civilized" countries.

We shall soon see that the remainder, or about three quarters of the 100 symbol elements of semantography are known to most children below school age, who started to scribble. These other symbols follow the outline of things, and should therefore comprise no difficulty for people in "uncivilized" countries, who at one time or another have employed a picture writing.

However, semantography employs 6 symbol elements, which by their very nature must be arbitrary. They indicate meanings, which in themselves have no outline.

65

The new six arbitrary symbols of semantography

The symbol for the opposite meaning



opposite meaning

It resembles an arrow pointing into opposite directions, and is to be used to point out the opposite of a meaning: love - hate, harmony - disharmony, etc.

Total of symbol elements

1

25

SYMBOL ELEMENTS FOR THING, ACTION, AND TIME

107
(27)

Total

Total of symbol elements brought forward

25

The symbol for the chemical THING



chemical THING

1

It follows the outline of the most symmetrical, beautiful form of a crystal, ^{already} formed at a time, when the hardening earth crust was in utter chaos.

An important "grammar rule" of semantography, taken from chemistry.

We abandon the notion of the "noun" in general. Instead, we introduce in these particular cases the notion of the chemical THING. Our universe consists of chemical bodies. The words earth, stone, horse, flower, man, baby and even I, you, who, whom, etc. indicate a chemical THING.

The symbol for the physical ACTION



physical ACTION

1

It indicates in its outline one of the most primeval ACTIONS on earth, the forming of volcano cones and the thrusting up of mountains. However, it may - for purposes of mnemonics - indicate the capital letter A in the Latin word Actus, a doing, an Action.

Another important "grammar rule" of semantography, taken from physics.

The chemical THINGS in our universe perform ACTIONS. In conventional grammar, all words pertaining to ACTIONS fall in the class of verbs and verb forms. The above symbol element will be used to indicate ACTIONS.

Combination examples will be shown in later chapters. Here we shall see how our symbols for the chemical THING and the physical ACTION, when used on top of other symbols, serve as indicators.



addition
the THING added



addition
the ACTION of adding



multitude
the THINGS



multiplication
the ACTION

The symbol for TIME

As the meaning of time has no outline available for its indication, we use an arbitrary symbol: the outline of two parabolical mirrors, the one turned backwards to mirror the past, the other turned forward to focus the future. In between past and future is the present, a fleeting glance, a moment.

1



past



present



future

These combinations in a smaller size, shall indicate the particles



then
ago



now



then
hence

Another "grammar rule" of semantography, taken from physics.

In every ACTION, which we observe, time is involved. Every ACTION occurs during a certain time. Consequently we should add these symbols to every ACTION indicator, (which we put on top of a symbol) to indicate past, present and future.

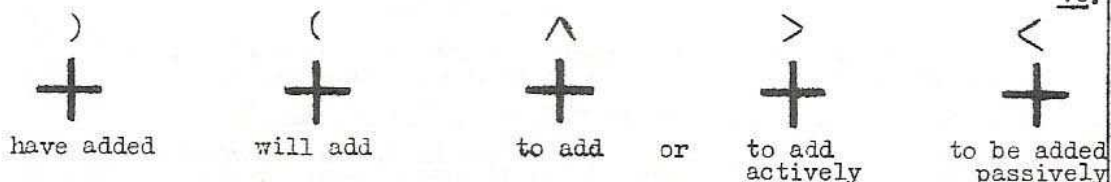
Total of symbol elements so far

28

Total of symbol elements brought forward

28

However it would be unnecessary to have two indicators on top of a symbol to indicate the ACTION. One indicator, for instance for the past, will be sufficient to indicate an ACTION in the past. However, we can also indicate active and passive.



Semantography is intended for practical purposes, short reports, etc. It is not intended for fiction or poetry. Consequently the three time phases are sufficient to cover the perfect, imperfect, pluperfect, second future, and a host of other obsolete tenses in other languages.

The symbol for human EVALUATION

Apart from the words indicating chemical THINGS and physical ACTIONS, we have a third group of words, which indicate human EVALUATIONS. They usually indicate meanings, which we don't find in nature, but only in our heads. Words belonging to this group are for instance beautiful, ugly, good, bad, imperialistic, etc.

As these EVALUATIONS vary from one individual to the other, we shall indicate their lability by the following symbol



human EVALUATION

The symbol shows the outline of a cone, standing on its top, indicating a very labile position. The cone may instantly topple over, when pushed, and it takes a lot of balancing to keep it in this precarious position. Just as with many EVALUATIONS of ours, which we hold, and which often topple over, when challenged. We shall see later on, how this symbol is put to work. The outline indicates also Latin V-alere = Value

1

The symbol for Creation

This symbol is wholly arbitrary, and we may say, that man shall ever use only an arbitrary symbol for this meaning. He can grasp this universe with his mind, and the limitations of his mind will limit his grasp of this meaning. He has given a variety of symbols to this meaning. They are alphabetical symbol combinations. In the English language they are Universe, Nature, Creation, Creator, God, and many others. For our geometrical writing we shall take a symbol which has been displayed on churches and temples for thousands of years.



Nature, Creation

We can vary this symbol, making it smaller, to indicate a smaller meaning, double and heighten it to indicate a heightened meaning and so forth. Here are some examples.



Creation



man-made



supra-natural

If we assume that the first large triangle should stand for what we perceive with our imperfect senses of Nature, then the second, heightened triangle should stand for what we usually cannot perceive with our imperfect senses.

Total of symbol elements so far

30

Total of symbol elements brought forward

30

Take for instance, those mysterious radio waves, which penetrate walls and surge around and through us. For me they are supra-natural, although I have given hundreds of lectures about them, and I worked even as an engineer, manufacturing radio tubes, high frequency parts, condensers, etc. What are they? Waves, corpuscles, or a manifestation of our curved space-time continuum? We don't know, and ultimately, we may never know. And what is thought, creative imagination?

We need a sensitive medium to become conscious of all this, an apparatus which reacts with those waves coming through space, or a human being, a poet, philosopher, founder of a religion, to tell us of things, of which we are not aware. Listen to Julian Huxley, in "UNESCO, its Purpose and its Philosophy" (66):

"Unesco... should pay special attention to seeing that borderline fields, especially those neglected by orthodox or organised science, are properly explored. As one example, we may take what is now generally called parapsychology - the study of the unusual and at the moment scientifically inexplicable properties of the mind, such as extrasensory perception of various kinds. The painstaking researches of one or two recent workers in this unpopular field seem to have established the reality of some degree not only of extra-sensory knowledge, but of pre-cognition. It is urgent that these phenomena should be thoroughly investigated so that a new and more comprehensive scientific framework of knowledge may be erected."

You are free to use the symbol for Nature or the symbol for the Supra-Natural, as you think fit. You are free to employ the sound symbol Nature, or Creation, or Creator, or God, or Purposive Force in the Universe, as you think fit. But don't lose sight of the fact, that all these symbols are arbitrary, indicating something of which the physiologist Du Bois-Reymond said: "Ignoramus, Ignorabimus". We don't know. We shall not know.

S U M M A R Y

We have so far listed:	Total
Arbitrary symbols, well known, and already used internationally	24
Arbitrary symbols of semantography, newly introduced.....	6
<u>Total of symbol elements.....</u>	<u>30</u>

From now on, we have a much lighter task, because the coming symbols are not arbitrary, in so far, as their outline follow the outline of the real things in a simplified manner. Somehow they resemble those symbolic drawings, which children make, when they draw the outline of the real things in a simplified manner.

However, there is one symbol which we must tackle, standing for something mysterious, the human mind; this symbol should indicate those marvellous conglomerations of brain cells, which enables man not only to contemplate Nature, Creation, but also to be a Creator himself, to create apparatuses and chemicals, which ^{may} have not existed on earth, (and which may be very rare in the universe), and to penetrate the universe, weigh the stars and take their temperature; the human mind.

The symbol for the human mind

Here at least, we can draw the outline of the encasing of this wonderful and fearful thing, the outline of the upper skull, seat of the brain.



mind, brain

1

In the previous "grammar rules" of semantography, we have employed our modern knowledge in chemistry, physics, astronomy, etc. In dealing with the symbol for the human mind, we shall employ other "grammar rules" based on our modern knowledge in psychology and biology.

Total of symbol elements so far

31

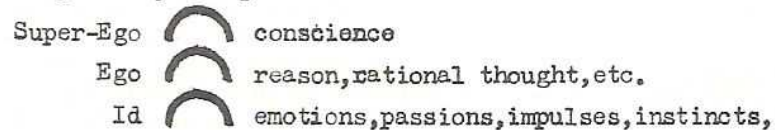
(30) Total of symbol elements brought forward
An important "grammar rule" of semantography, taken from psychology.

Philosophers of old and with them, bygone generations have divided the mind (seat of the "soul") into 3 "partitions", interwoven and without clear boundaries.

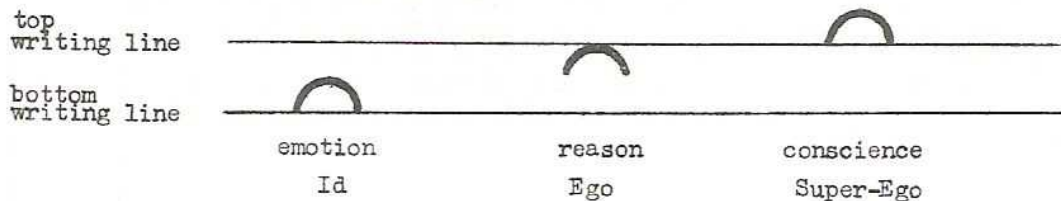
- (1) seat of the emotions, feelings, passions, impulses, instincts, etc.
- (2) seat of rational thought, reason, etc.
- (3) seat of conscience

The third partition "conscience" was accorded the highest place. It is bound up with the meaning of "good" and "evil", "ethics", "morality" and God.

However we have seen all too often the clinical picture of various minds, who have committed the greatest crimes with a "clear conscience" and who even cried that God is on their side. This therefore is a matter for the medical man, and we should better employ medical terms in a world, where the ^{of many} minds seem to be perverted. Sigmund Freud, the father of modern psychology, has termed the 3 partitions: Id, Ego, and Super-Ego. The complete symbol picture of the whole mind is



The symbols of semantography are written between two lines. Consequently we shall write our symbols for the three partitions of the human mind in three different places, distinguished by different heights.



In choosing these medical terms, Freud has clearly demonstrated our complete ignorance on "brain matters". The term Id is the Latin word for It. We do not live our lives. It lives us! "We are lived by unknown and uncontrollable forces". The meaning of the Super-Ego will become clearer by the ultimate symbol we shall allot it.

Another "grammar rule" of semantography taken from psychology.

We shall devise simple symbols for the prevalent meanings: Unconscious, Subconscious, Preconscious, and Conscious. Unfortunately, the first two meanings are often mixed up. We shall therefore use the meaning of Unconscious for the state, when being asleep or having fainted. Subconscious shall indicate the waking state, when we are "unconscious" of what is going on in the depth of our soul. Preconscious should indicate the emerging intermediate state between the Subconscious and the Conscious.

We shall anticipate an important symbol element from a later page



and use it to symbolize the discussed meanings. Modern psychology endeavours that we shall become conscious of our emotions, as well as of our reasoning.



Now, we shall not lose sight of the fact, that these symbols represent very unsatisfactory "crutches" to help our imagination in regard of the "unknown and uncontrollable forces" which live us. Different schools of modern psychology

have chosen different word symbols, which however are just as unsatisfactory as the geometrical symbols. You have to be a chemist to realize that we know next to nothing about the physico-chemical interactions which take place within the brain cells.

Nevertheless, a start has been made, and surgeons operate today on the notions of Freud. Hopelessly sick persons, ravaged by an overbearing conscience, which torments them day and night (although they have not committed any major "sin") are restored to health and sanity by a brain operation. Soon the medical men will operate on people, who have not enough of conscience, killers and mass-killers.

The foregoing symbols can be used for strictly medical terms in psychology. For ordinary talk we shall revert to simpler symbols. Instead of the shown symbol for emotion, we shall employ an age-old symbol, drawn by the cave man and still employed in any language on earth - the heart. The "heartfelt" desire, from the bottom of our "heart" and other phrases indicate ^{erroneous, but} the age-old belief that the heart is part of the soul. This symbol we shall use for "small talk" only.

Here are the three simple symbols for ordinary writing.



emotion
passion, impulse,



reason,
rational thought



conscience
Super-Ego

The simple symbol for "conscience" shows us another mind, superimposed on the reasoning mind. Freud interpreted this as the mind of the father. Jung, the early collaborator of Freud, interpreted it as ^{that} the mind of God. Both interpretations are valid. Just as Freud, also Jung points out ^{that} all these words like "instinct" and "spirit" are "terms, that we allow to stand for powerful forces, whose nature we don't know."

The few paragraphs above, are only an oversimplified abridgement of a group of chapters in the book, and this group of chapters again is an oversimplified abridgement of these most difficult problems. However, for a simple symbol writing, we need some simplified symbols, and the book may convince the readers, that the chosen symbols are practical - they serve their purpose.

Here are a few simple combinations. First the heart symbol, for "friendly" feelings and expressions.



feeling of doubt



uplifting joy



downheartedness



love

These meanings find their literal translation in many languages. And here-below are a few other combination symbols as examples for "higher" meanings.



Nature
Creation



man-made



science, philosophy
mind contemplating nature



designing, planning
abt. man-made things

These few symbols show that we can symbolize any meaning in this realm with simple outlines. The book gives many more examples of this kind.

Another important "grammar rule" of semantography, taken from physiology.

The brain is that part of the human body, in which our thoughts originate. Besides this function, the brain co-ordinates all our other "senses". These senses are operated by different organs, the "eye, the "ear", the "nose", etc. etc. We need only a few symbols to cover most meanings in any language, referring to sense-actions and reactions. These symbols are, besides the mind symbol, the most important symbols of semantography. These symbols are easy to draw, and we will follow the outline, which children draw in their scribbling. Our typewriter will enable us to type these symbols in less time and with lesser effort than we need to-day to type the ordinary words on an ordinary typewriter.

The symbol for the eye Total of symbol elements brought forward

□ ^ This symbol shall stand before any symbol compound indicating any meaning, which refers to vision, such as: sight, to see, visual, light, dark, form, shape, clear, transparent, colour, red, green, picture, look, glance, and any other meaning. Examples are shown on page 153 ff.

eye vision 1
THING ACTION

The symbol for the ear

□ ^ This symbol shall stand before any symbol compound, denoting meanings in connection with our sense of hearing, such as: to hear, to listen, sound, noise, tone, music, bang, crash, listener, etc. etc. Examples are shown on page 156 and in later chapters.

ear hearing 1

The symbol for the nose

□ ^ This symbol shall stand for any meaning referring to our sense of smell. Such meanings are for instance: odour, fragrance, perfume, etc. etc. To indicate the meaning of taste, we shall combine the symbol for the nose with the symbol for the mouth, as shown below. We know that the sense of taste is exercised by strangely working cells on the inner surface of the mouth and the nose. Hold your nose tight, and you may swallow any bad tasting medicine completely "tasteless".

nose smell 1
THING ACTION

The symbol for the mouth

□ ^ This symbol shows the outline of the mouth, which organ performs a series of activities: eating, tasting, breathing, but above all speaking. As this activity refers to the greatest group of words in our language, we shall agree that the mouth symbol alone, shall stand for speech and in combination, for any meaning referring to this activity. We shall see later on, that we can dispense with the indicators on top of the symbols. The word order and context usually makes it clear whether THING or ACTION is meant.

mouth speech 1

Combination examples:

taste, mouth & nose	discussion to and fro	language mouth and ear	song mouth & note

The symbol for the hand

∨ This simple outline indicates the thumb and index finger of the (right) hand. It indicates this important organ of our body, and shall be used for meanings indicating "handling". With another symbol in combination (to be shown later) it shall indicate hold, grip, etc. With the ACTION indicator on top it shall stand for that sense which we term "touch".

hand 1

In connection with the symbol for chemical THING, we get the meaning of tool = a thing in hand. It indicates the first primeval tool of primitive man: a stone in hand. Gorillas and chimpanzees use it too.

indicator □	∧		
∨	∨	□	⊥
hand the THING	to touch the ACTION	THING	tool, instrument thing in hand

We shall see in later chapters, especially on medical terms, that we can easily depict other parts of the body with simple symbols. But the above shown symbols are the most important ones and cover large groups of words in any language

The symbols for male and female human being

Total of symbol elements

brought forward

57



male
human



female
human

These symbols are self-explanatory. We shall learn later on, that the outline represents more than indicated at first sight (man = outstretched legs; woman = skirt). It should be understood, that these symbols do not represent a grown-up man or woman, but only a male or female of the human species, no matter what age, and without any other evaluation (good or bad, healthy or strong, or weak or sick). The symbols indicate nothing more than a male or female biped. As the female symbol is a derivation from the male symbol we count:

1

And now we shall form our first sentence and from this a compound symbol



man



thinks



thinker

Now we come to the most important "grammar rule" of semantography, taken from biology.

Not two human beings are alike. With regard to twins, the common form is the binocular kind or two-egg twins, fertilized at the same time, by two different sperms. These twins have therefore different arrangement of chromosomes and genes, and are therefore different human beings. However, there is the rare case of the uniovular or one-egg twin. One fertilized egg, separates in two identical twins, who show even the same fingerprints, and are identical in heredity.

Then comes environment. If one of the twins is beaten up by the boys gang from the next street, it may change his outlook on life completely, and may make him a different human being altogether.

As Julian Huxley put it: "Biological difference is, for all practical purposes universal."

And this brings us back to the most important "grammar rule" of semantography.

No two human beings are alike. Consequently, not two human beings think alike, see alike, hear alike, feel alike.



John is different from Jack

John will think differently, feel differently and act differently from Jack.

The biologists go even further. They tell us, that our body changes constantly. The cells of our body including the cells of our brain are in incessant action and change. And we can write this down in a formula



John now is different from John yesterday (past)

John today may be a quite different man from what he was yesterday. Over night he may have "changed his mind", literally and biologically.

The mind therefore is the GREAT VARIABLE in the world of ours. The two billions human beings on this planet have two billion different minds, which are not only different from each other, but change in themselves. They will think, feel, and act differently to-morrow. The mind of man is the great X in our calculations.

We shall see, that we can apply the mind symbol like a variable in the calculus of function, and thus bring into semantography a similar reasoning (in some sort of way) as Bertrand Russell^{used} in his propositional function. Somehow, the symbol of semantography can work like in mathematical formulae, a first practical realization of Leibnitz' dream of a universal symbolism, an alphabet of human thought. Semantography may be used on the practical level in a similar way, as logicians use their symbols in mathematical logic on a much higher level: to make us understand the working of the human mind in his utterances - language.

Semantography is a far cry from the books on symbolic and mathematical logic, just as the simple mathematics which the grocer and housewife employs, is a far cry from the books on the "Foundations of Mathematics". However, if we want that this world of ours shall not go to pieces by "propaganda" we must invent a simple mathematics for the thinking of the simple man. Semantography makes no higher claim than being a practical tool for practical purposes.

To indicate this variability of the human mind, whose evaluations are different in different minds, and different in the same mind today than to-morrow, we shall combine the symbol for mind with the symbol for human EVALUATION, shown on page 28.



HUMAN EVALUATION

The mind symbol does indicate thought, but - as the brain is the center for the other senses - it indicates also their activities, speech, hearing, vision, smell, touch, feeling, etc., etc.

Wherever you see a symbol or symbol compound carrying the mind symbol, or the few other sense symbols, you should know that the meaning of this symbolized word may differ with different individuals, and that even the same individual may attach a different meaning to it to-morrow or the day after to-morrow.

The symbol for EVALUATION (alone, without the mind symbol) and put on top of other symbols, shall serve as ^(adverbs) indicator. The foremost group of words pointed out in this way will be the adjectives. Herebelow is an example with the symbol for the sun

☐
○
sun
the THING

^
○
to sun
the ACTION (verb)

∨
○
sunny
EVALUATION (adjective)
(adverb)

This is a simple example, but it can serve to show, that "sunny" can be used as an abstraction which we make in our head, about the qualities of the THING sun. We never say a "sunny sun" or a "piggish pig". The abstraction-evaluation is done in our heads, when we attach qualities of one thing to another. The saying "A sunny person" may be quite harmless, although other people may quite differ in their EVALUATION of that person. But when we say "A piggish person", we are looking for trouble. It will be shown, that many adjectives and many words, denoting directly a chemical THING or a physical ACTION but carrying EVALUATION attached to it, can cause this trouble - in certain circumstances and contexts. The meaning of such words is usually vague or relative, and will therefore differ with different individuals. To remove their vagueness, we must clearly state the system of reference, and add further explanations as to THINGS and ACTIONS.

The foregoing pages represent a short outline of the "grammar" of semantography, intended for those readers, who have no time to read the book.

From now on, it will be ^{now} children's play, because we shall draw simple symbols, like those ^{which} children draw. It may be fitting to add up our symbol elements.

S U M M A R Y

We have so far listed

Arbitrary symbols, well known, and already internationally used.....	24
Arbitrary symbols (in outline) of semantography, newly introduced....	6
Outline symbols of semantography, newly introduced.....	8

Total of symbol elements so far 38

38

We are still far off our 100 symbol elements, and a counting of the symbols for the most used words, would show that these 39 symbol elements in variations and derivations, cover a large proportion of our vocabulary.

Total of symbol elements brought forward

38

List of outline symbols(continued)

It can be proved that many of the following outline symbols could be depicted by the foregoing 38 symbols. Although unnecessary, we may add a few symbol elements from chemistry. H₂O will be recognized by almost anyone who went to school, that it means water in any language. About 50 % of the symbols shown in the book are written with those 38 symbol elements shown before. With ^{some} additional 25 symbol elements we can cover about 70% of all the symbols which you find in the whole book. Your attention is directed to the simplicity of the coming symbols, most of which are almost self-explanatory.



time

We have already a symbol to depict time(past, present and future) but we can use the simple outline of a dial, and get a symbol which is self-explanatory. (for display on time tables, etc.)

1



house

The symbol for a house is equally self-explanatory. Simple as it seems, we can split it up in its "line letters" and thus get other important symbols, which we regard as derivations from the house symbol. From the earth symbol we derive the counterpart: sky.

1

and its components:



sun

Instead of drawing a circle to stand for the meaning sun, we may write a compound symbol with the foregoing symbol elements, depicting a thing in sky, which enables to see. Chinese characters are sometimes similarly used to circumscribe a meaning. But we can allot one symbol element to the meaning of sun.

1



moon

Moon can be depicted as smaller thing in sky, but a simple outline of the moon in its first quarter is self-explanatory.

1



star

Star can be depicted as far thing in sky, but the adoption of the childrens symbol for a star is simpler.


1



mountain

Mountain can be symbolized by this triangle. On page 115 it is proved that this simple outline is so full of details, that we can use an arrowhead as a pointer to point out the basis, foot slope, top, ridge, precipice, foot of precipice and others.

1

If we diminish the symbol in size we derive the  symbol for: stone



water

Water is already internationally symbolized by the chemical symbol compound H₂O. However, we can devise an even simpler symbol, by drawing the outline of a wave. In a later chapter, we learn how to derive from this symbol the symbol for wave, electromagnetic wave, radio wave, and wave in general.

1



fire

Fire can be easily symbolized by the compound +O, which would mean plus-oxygen, and ^{would} indicate what fire really is, a process of oxidation. Once we accept the symbol +O to mean fire, any school boy or girl would identify it each time as such. However a simple outline of a flickering flame is even simpler.

1



pen writing tool

Pen, pencil, or writing tool in general can be depicted as a tool to make visible marks. These meanings can be depicted with the foregoing 39 symbols. However, the meaning of writing tool is so important, that we shall allot a special symbol element for this meaning; the outline of such a tool, in a slanting position,

1










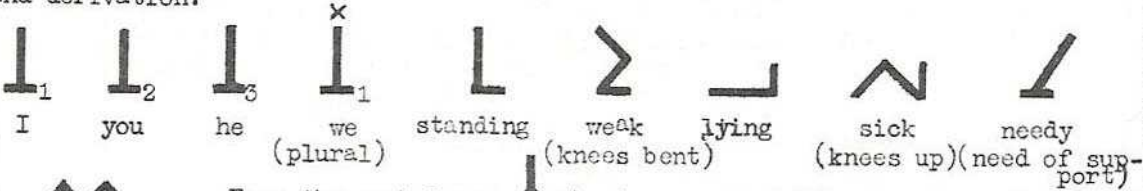







paper(leaf)

Paper (leaf) is such an important item in our modern world, that we shall allot a special symbol element for

1

Total of symbol elements so-far

48

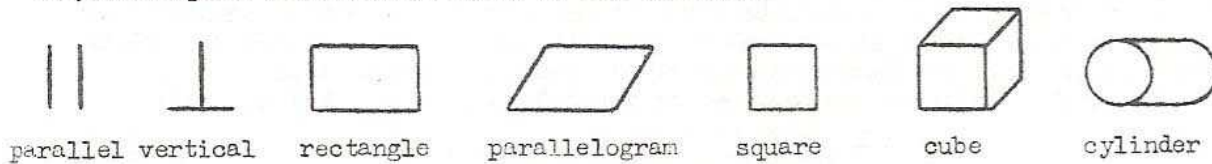
<u>Total of symbol elements brought forward</u>		48
 paper	<p>it. However we could depict the meaning of <u>paper</u> with a few of the foregoing 39 symbol elements, as follows: <u>thing to make visible marks on.</u> But, the simple outline of a paper leaf is better and its repetition gives us the symbol:  book</p>	1
 letter (post)	<p><u>Letter</u> could be depicted by the combination of the <u>paper leaf</u> and an <u>arrow</u>, meaning <u>paper for forwarding</u>, or <u>paper moving in a direction</u>. But the outline of a letter envelope is already used all over the world, so let's use it too.</p>	1
 sword, knife	<p>A <u>sword, knife, cutter</u>, can be symbolized by <u>tool to divide</u>, but the simple outline of a sword with a handle, as children draw it or make it from two pieces of wood, is even simpler. <u>Crossing of swords</u> (as shown on the cover picture) is an old symbol, standing for <u>war, fight, military</u>, etc.</p>	1
 wheel	<p><u>Wheel</u> could be depicted by the symbols for <u>tool</u> and <u>arrow</u>, meaning <u>tool for forward moving</u>. But our outline is simpler. Combinations will give us the meaning of <u>vehicle, car</u>, etc.</p>	1
 vessel, bowl, hold	<p><u>Vessel, bowl, hold</u> is a very important elementary meaning, and this simple symbol, showing the outline of a bowl will help us for hundreds of meanings as shown in later chapters.</p>	1
 individual and derivation:	<p>Instead of the previously shown symbols for <u>male</u> and <u>female human being</u>, we can devise a general symbol, which shows in outline an erect standing person, (feet slightly apart). This symbol should indicate a <u>human individual</u>, and we can combine it to other meanings, by altering the outline slightly, ^{etc} as shown below.</p>	1
	<p>From the symbol <u>man</u>  showing an erect biped, we can - by simple derivation - develop the symbol for <u>quadruped</u>, and for <u>insect</u>, most of which have six legs. In a later chapter it is shown how further simple classification can be made. Zoologists don't need such symbols. They have their international Latin nomenclatura. The interested reader may peruse chapters on p. 319ff, 327ff.</p>	1
 animal (4 legger)	<p><u>Bird</u> can be simply symbolized by the shown outline. The wings alone will serve us for most meanings, necessary in modern aviation, as <u>flyer, pilot, flying machine, airmail</u>, etc. etc.</p>	1
 insect (6 legger)	<p><u>Fish</u> cannot be easily depicted by its familiar outline. We are hampered by the limitations of the semantography typewriter. A simple outline, typed with two pressings of keys should serve for the meaning of <u>fish</u>.</p>	1
 bird	<p><u>Plant</u> can be symbolized by a stem, a bulb (or fruit) and a leaf. In later chapters it is shown, how we can, by simple derivation, and slight alterations, derive outlines which act as simple symbols for <u>flower, fruit, berry, vegetable, tree, shrub</u>, etc. etc. Botanists don't need these symbols. They have their Latin names.</p>	1
 fish	<p><u>Electricity</u> can be symbolized by using the plus + and minus - symbol, as shown in the chapter on physics. However, the outline of a lightning is already internationally used to indicate it.</p>	1
 plant	<p style="text-align: center;"><u>Total of symbol elements so far</u></p>	57
 electricity		

And here we may pause and reconsider, what was said in the beginning of this chapter. A geometrical writing uses "line letters", simple lines which we can add together in different positions to get different meanings. In a similar way we put the phonetic letters of the alphabet together, to form thousands of different meanings. However, the phonetic compounds do not indicate the real thing in nature, whereas an outline does. For this

reason, a geometrical outline compound can serve as symbol for any language, whereas, the phonetic letter compound for any word is different in different languages. If we say, that the 26 letters of the alphabet can be used to put together thousands of compounds, we could equally say, that the 11 "line letters" shown on page 24, can be used to put together thousands of compounds, which indicate truer and better the meanings. The foregoing 19 symbols showing a dial, a house, the sun, moon, star, a letter, a knife, a wheel, etc. etc. are nothing else than compounds of the 11 "line letters". But why 11? If you look them over

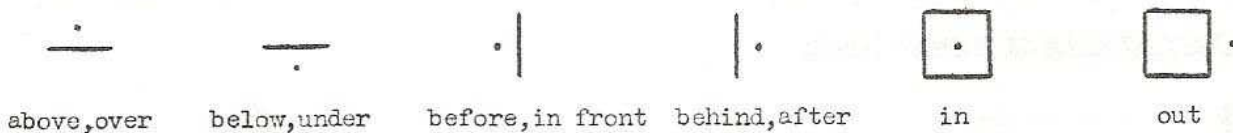


you will find that ten, resolve in a short line, put in different position, or curved. Could we say that most symbols of semantography (with the exception of the 6 arbitrary symbols and the 24, already internationally used, symbols) are simple outline compounds written with the line letter put in different position? Yes we can, because semantography is a geometrical writing, and we have learned already in school to write with the line letter, and compose different meanings as for instance:



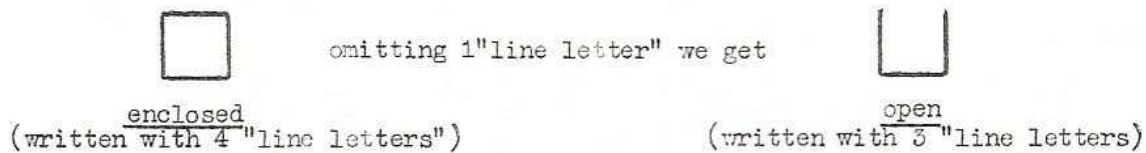
parallel vertical rectangle parallelogram square cube cylinder

All these meanings are composed with one "line letter" put in different positions, and what we did in school, we shall do also in semantography to write down the above meanings. And this reasoning can be extended. We use the "line letter" and the dot to compose the following meanings:



above, over below, under before, in front behind, after in out

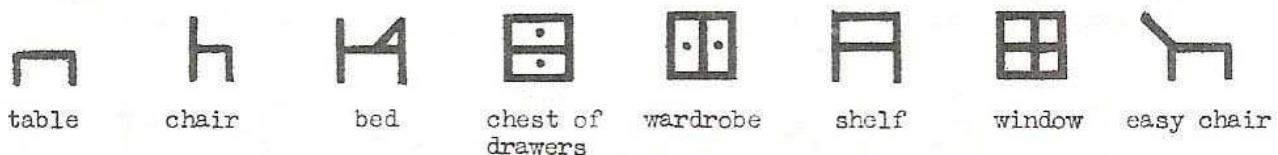
In the first "words" we have used 2 letters (dot and line). In the "words" for in and out we have again used the letters (line and dot) in different numbers and positions. Actually we use the "line letter" 4 times, when writing "enclosed" and omit 1 letter for "open"



and we may formulate this "legitimate" reasoning as follows:


When we use lines in different positions to draw the outline of things in a simplified, schematized way, we may consider this "line-joining" a similar procedure as the "A B C joining", but a more advantageous one, because ^{the drawn words are} independent of any language and often almost self-explanatory.

We may even take the word "line-joining" literally in so far as we act like a "joiner" a carpenter. He too takes straight line elements, the wooden boards and joins them together by putting them in different positions. We too can establish such a "line joinery"



We have made similar operations as those of a joiner, and children do something similar. Of course we can agree that these are different symbols, just as the English words table, chair, bed are different symbols which indicate certain things. But in regard of the symbol elements we must apply similar reasoning in both cases; 26 letters of the alphabet for phonetic writing against 1 or at most 11 line letters for a geometrical outline writing. To these come the 24 arbitrary international symbols and the 6 arbitrary symbols of semantography.







(37a)




























But we can even reduce this number. On page 26 it has been outlined, that we can dispense with the Aesculapian symbol for medicine, and compose help for sick instead. We can similarly dispense with the Mercurian symbol for money (thing for exchange) and even the musical note can be replaced by a compound symbol heartmoving sounds, which compound would stand for music. On page 331 you will find that we can replace the outline symbols for such household articles like table, chair, bed, etc. etc. by more elementary symbols in combination. A table can be composed by the symbols: tool-flat-horizontal. Once we agree that this line combination should mean a table, it will be a better symbol than the line combination t-a-b-l-e in English or m-e-n-s-a in Latin. These phonetic line combinations are wholly arbitrary, whereas our geometrical symbols tool-flat-horizontal tells you of the relevant structure of a table, (just like a chemical formula). But - for practical purposes we can choose an "auxiliary symbol" thus  and agree that it should mean table. It is actually the outline of a table.

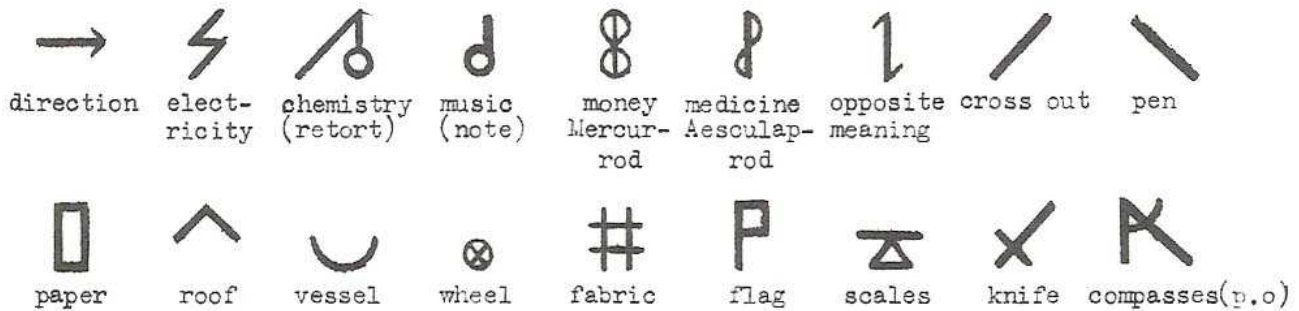
Such simple outline symbols, we shall treat as auxiliary symbols. We can dispense with them, and use the more elementary symbols, especially those, expressing geometrical conceptions (horizontal, parallel, square, etc). But our auxiliary outline symbols are simpler and therefore more practical. This should be our main consideration, because semantography should be a practical tool, also intended to teach the more than 1,500,000,000 illiterate people in Asia, Africa, South America etc, a simple and universal writing.

From this point of view let us draw up the final list of our symbol elements.

THE SYMBOL ELEMENTS

										Total		
<u>Arbitrary symbols already in use</u>												
1	2	3	4	5	6	7	8	9	0	+ - X ÷ = >	. . ?	19
<u>Arbitrary symbols of semantography</u>												
										5		
chemical THING	physical ACTION	human EVALUATION	TIME	NATURE CREATION								
<u>The symbol for SPACE representation</u>												
	This one dimensional element will serve to picture any geometrical meaning of our three dimensional world (either by cross-section or perspective drawing) as demonstrated on page 37 and in the chapter The Relativity of Space on page 144.									1		
LINE	With this geometrical element and the above 24 other symbols, we can symbolize most meanings, but we are free to compose simple auxiliary outline symbols, which indicate the outline of things.											
OUTLINE SYMBOLS										Total		
										25		

										
mind	heart	eye	ear	nose	mouth	hand	arm	legs & feet		
										
individual human being	male (biped)	female (biped)	animal quadruped	insect hexaped	bird	fish	plant	tree		
										
time	sun	moon	star	earth planet	earth line	sky	water	fire		



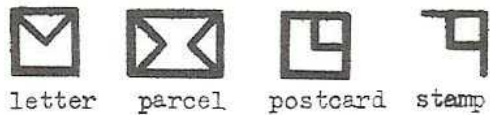
Now we have 25 symbol elements and these 45 outline symbols, which leave us still 30 symbols. The reader may peruse the nearly 600 pages of the three books on semantography and he will find that most meanings are symbolized by the above 70 symbols, and their geometrical derivations and combinations.

C.K.Ogden has composed his 850 words of Basic English. In his Basic English Dictionary (Evans Brothers, London) you will find 40,000 meanings of over 20,000 words all composed with the 850 basic words. You can express almost any meaning with these 850 words, sometimes of course with some circumscription. For practical purposes, Ogden offers 50 to 150 special words in addition for each "trade", geology, astronomy, medicine, economics, etc. Although these words can be defined by the 850 words, their additional use facilitates communication.

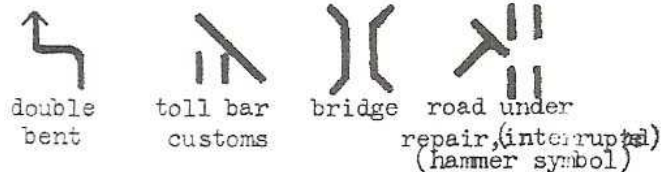
We shall act in the same way. For special purposes in each "trade" we can compose some auxiliary outline symbols and a few examples are shown below. However, - and you will find the proof in the book - each auxiliary symbol can be expressed by the above 70 symbols. Nevertheless, the auxiliary outline symbol is practical and almost self-explanatory.

**EXAMPLES OF AUXILIARY OUTLINE SYMBOLS
FOR SPECIAL PRACTICAL PURPOSES**

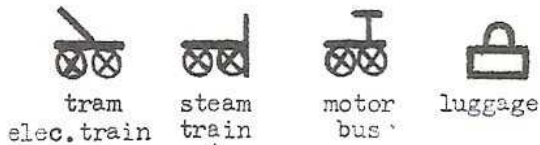
For Postal Service (see p.121 ff)



For Highway Signs (see p.357 ff)



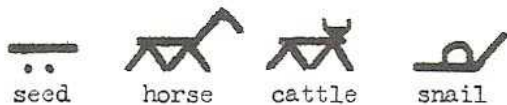
For Transport Service (p.224 ff)



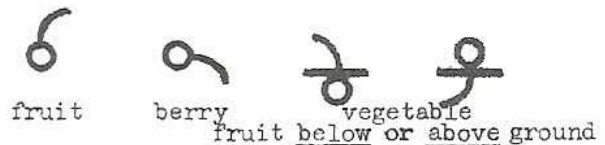
For Passport Service (p.342 ff)



For Farmer Service (p.108,327 ff)



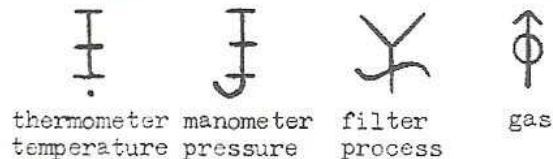
For an International Menu Card (p.319 ff)



For Shipping Service (p.236 ff)



For practical Chemistry in Home or Shop (p.368 ff)



But again, I wish to stress - and I have proved it in my book - that:
EVERY AUXILIARY OUTLINE SYMBOL CAN BE WRITTEN WITH THE 70 SYMBOL ELEMENTS SHOWN ABOVE, AND SOME OF THESE 70 SYMBOLS CAN BE REDUCED TO MORE ELEMENTARY SYMBOLS.

A SUMMARY LIST OF THE MAIN BASIC SYMBOL ELEMENTS

and some of their derivations and combinations

and a warning to the reader

The following 19 pages have been prepared after the publication of the 3 books on semantography, mainly to serve those students who wanted a summary list AFTER they had studied the many lengthy chapters, explaining in detail the graphics, logic, and semantics of the symbols.

A certain danger is involved in looking through this summary list BEFORE studying the chapters. Many people think that pictorial symbols could be understood "right away" without explanation, because pictures are "self-explanatory". But many pictures are not "self-explanatory."

These symbols consist of few schematized lines which indicate faintly the outline of things. Their meaning has to be explained.

Take the well-known pictorial symbol of the arrow → It is meaningless to those who never saw an arrow, and to those who are not told that it does not picture an arrow, but means a direction sign only.

in semantography and in science the arrow means more than a direction sign. It means an active force, and a directed movement. Consequently the arrow appears in many semantographic symbol combinations, even

in those which "picture" a democracy and a demagogy.

Every democrat and demagog represents a driving force, and a directed movement. They both think, and make us believe, that they are leading us onward → forward → and toward → progress → (whatever these words may mean).

How then can we tell truth from untruth? How can we distinguish between true democratic progress, and its opposite falsehood?

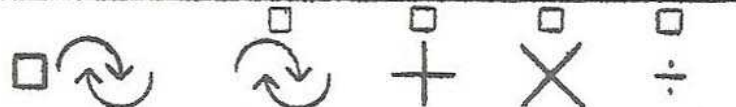


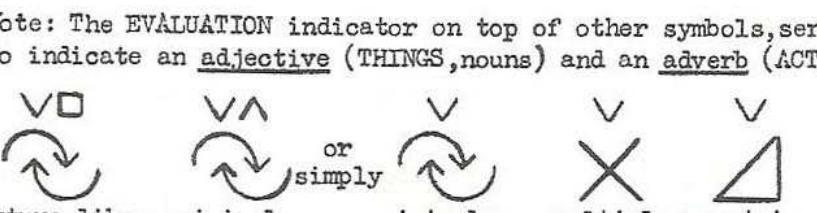
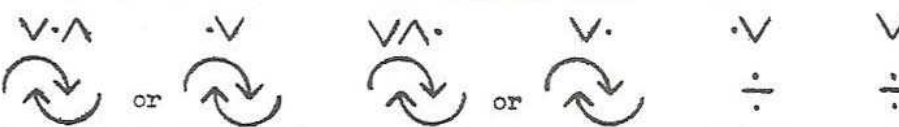
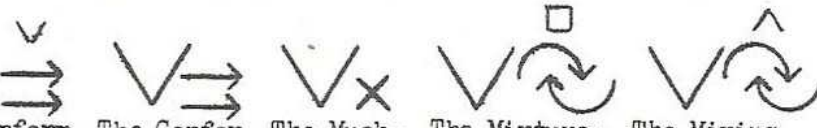
By applying the simple semantic rule of semantography for the arrow symbol, every time we hear or read a word in the papers, a word which contains the arrow symbol in semantography. This rule must be learned.

SO DON'T BE DISCOURAGED DEAR READER, IF YOU DON'T GRASP THESE SYMBOLS "RIGHT AWAY" AND WITHOUT AN EXPLANATION. You have learned the symbols 1 2 3 4 5 6 7 8 9 0 and now they appear to you "self-explanatory". But they did cost you a lot of learning.

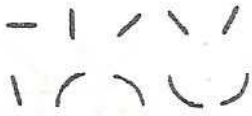
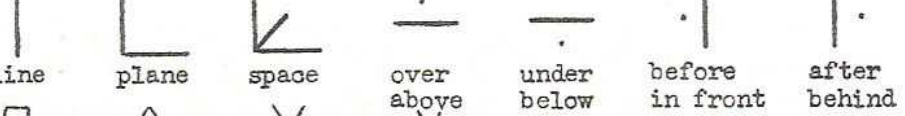
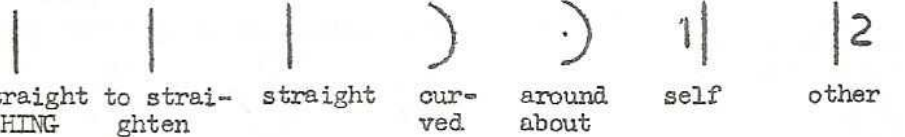

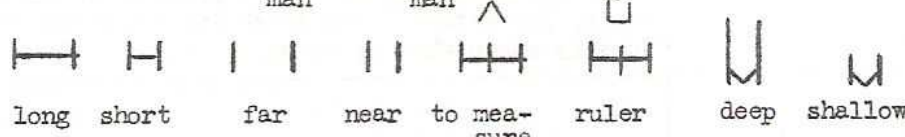
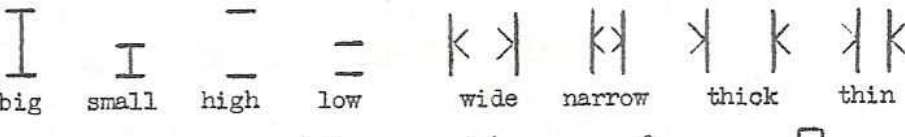
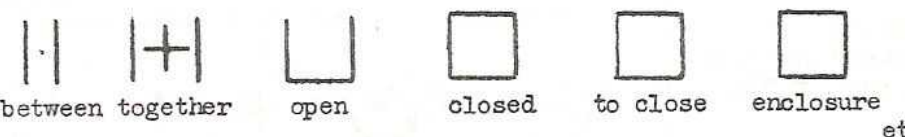


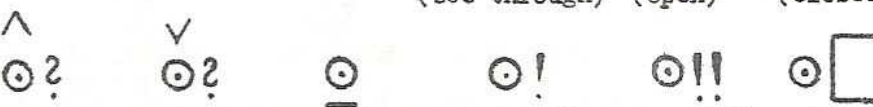

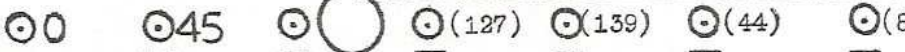
Everything in life, which can help us, needs some learning. Only then does it become familiar and useful.

Symbol element and meaning	Derivation and combination examples and their respective meanings (underlined)
$+$ <u>addition</u> (known) see p.107,108,250	$+$ $++$ $+$ $+$ $+$! $+$! <u>and,</u> <u>etc.</u> <u>with</u> <u>belongs to</u> <u>yes</u> <u>too,also,</u> <u>further-</u> (high up) (written low) <u>more</u>
$-$ <u>subtraction</u> (known) see p.291, 308,	$-$ $-!$ $-$ <u>without</u> <u>no,not</u> <u>loss,waste</u> (in comb.with other symb.)
\times <u>multiplication</u> (known) see p.243-246	\times \times $\times\times$ \times $\times\uparrow$ $\times\times\uparrow$ <u>plural</u> <u>much</u> <u>very much</u> <u>group meaning</u> <u>grove</u> <u>forest</u> (when on top: <u>many</u> <u>very many</u> <u>added to other</u> <u>many</u> <u>very many</u> of other symb.) <u>symb;see examples.trees</u> <u>trees</u>
\div <u>division</u> (known) see p.250-252	\div $\div\uparrow$ see also p.122, 125 and other pages listed in the index <u>part meaning</u> <u>branch</u> <u>added to symb.</u> (part of tree) see example:





















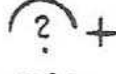
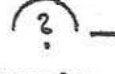
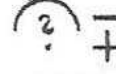







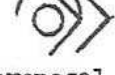
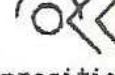
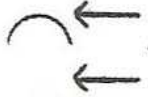


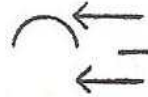



















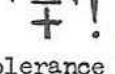
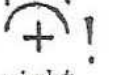
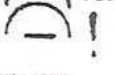
Symbol element and meaning	Derivation and combination examples and their respective meanings (underlined)
<p>< or ></p> <p><u>relation, with reference to</u> etc.</p> <p>see explanations in the special chapters on page 430 - 438 see also index</p>	<p>< > > . > . > < > < -> -<</p> <p><u>of on</u> <u>of about</u> <u>position</u> <u>at</u> <u>1st alternatives</u> <u>2nd alternatives</u> <u>either or</u> <u>neither nor</u> (minus symb.)</p> <p>>> << >> << >.. ..<</p> <p><u>purpose</u> <u>counter-purpose</u> <u>for</u> <u>against</u> <u>here</u> <u>there</u></p> <p>▷ ▹ ▷ ▹ ▷</p> <p><u>cause</u> <u>effect</u> <u>therefore</u> <u>by</u> <u>effect & cause</u></p> <p>outline of <u>consequently/caused by</u> <u>caugation</u></p> <p>wedge imprint</p>
<p>?</p> <p>question mark (known)</p> <p>see explanation in the special chapter on page 442 - 446 see also index</p>	<p>[?] [?] ? ?\ ?⌚ ? ?□</p> <p><u>question (open)</u> <u>answer (closed)</u> <u>what?</u> <u>who?</u> <u>when?</u> <u>where?</u> <u>what?</u></p> <p>(what mark?) (what time?) (what place?) (what thing)</p> <p>?▷ ?x ?÷ ?^ ?v ?>|</p> <p><u>why?</u> <u>how much?</u> <u>which?</u> <u>how?</u> <u>how?</u> <u>where to?</u></p> <p>(what cause?) <u>how many?</u> (what part?) (what action?) (what quality?)</p>
<p>→</p> <p>arrow (known)</p> <p>see special chapter on page 224 - 226 see also index</p>	<p>⊢ → | → → → | →</p> <p><u>start, begin</u> <u>departure</u> <u>forward</u> <u>approach</u> <u>end, stop.</u></p> <p>|> |> > | >|</p> <p><u>from</u> <u>off, away</u> <u>towards</u> <u>to</u></p> <p>→ ← ⇌ ↗ ↻ ↻</p> <p><u>attraction</u> <u>conformity</u> <u>gathering</u> <u>circling</u> <u>mixing</u></p>
<p>></p> <p><u>pointer</u></p> <p>to be used in close touch with other symbols see special chapt. p. 247 - 250</p>	<p>The following arrowhead is used as a pointer to point out details on symbols. Herebelow is an example: details of a mountain.</p> <p>△ △ △ △ △ △</p> <p><u>mountain</u> <u>basis</u> <u>foot</u> <u>slope</u> <u>top</u> <u>precipice</u></p>
<p>↓</p> <p><u>opposite meaning</u></p> <p>p. 245ff</p>	<p>x lx x lx x lx</p> <p><u>much</u> <u>little</u> <u>more</u> <u>less</u> <u>most</u> <u>least</u> <u>hate</u></p> <p><u>many</u> <u>few</u> <u>opp. of love</u></p>




































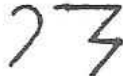

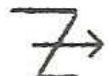
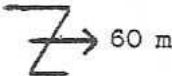












Symbol element and meaning	Derivation and combination examples and their respective meanings (underlined)
<p>□</p> <p><u>THING</u></p> <p>any thing, consisting of chemical matter.</p> <p>see p.258ff (noun)</p> <p>see p.263ff, 269ff</p>	 <p><u>mixer</u> <u>mixture</u> <u>addition</u> <u>multitude</u> <u>part</u></p> <p>the <u>THING</u> which <u>THING</u> <u>THING</u> <u>THING</u> <u>THING</u></p> <p>does the mixing mixed added multiplied divided</p> <p>Note: the THING symbol on top of other symbols, serves as an indicator, indicating a chemical THING.</p>
<p>^</p> <p><u>ACTION</u></p> <p>any physical ACTION (verb)</p> <p>p.258ff</p> <p>see explanations in special chapters p. 263ff, 269ff, 517ff, 320ff, 323 - 327</p> <p>see also index</p>	 <p><u>to act</u> <u>to work</u> <u>The Mixing</u> <u>to mix</u> <u>to add</u> <u>to divide</u></p> <p>verb verb verbal noun verb verb verb</p> <p>Note: The ACTION symbol on top of other symbols serves as an indicator, indicating a physical ACTION. Standing in enlarged size before a symbol, it indicates the verbal noun.</p> <p>The ACTION indicator indicates usually the active form. However if it is necessary to stress the active form f.i. for transitive verbs, the ACTION indicator can be turned sidewise pointing thus like an arrow towards the object acted upon. The reverse indicates the passive form.</p>  <p><u>to mix</u> <u>to be mixed</u> <u>to divide</u> <u>to be divided</u></p> <p>(active, trans.) (passive) (active) (passive)</p>
<p>∨</p> <p><u>EVALUATION</u></p> <p>Value indicator Quality " (adjective) (adverb)</p> <p>see explanations in special chapters p.114, 143, 161, 260ff, 270ff, 338, 375ff.</p> <p>see chapter p.328</p> <p>see also index</p>	<p>Note: The EVALUATION indicator on top of other symbols, serves mainly to indicate an <u>adjective</u> (THINGS, nouns) and an <u>adverb</u> (ACTIONS, verbs)</p>  <p><u>mixture-like</u> <u>mixingly</u> <u>mixingly</u> <u>multiple</u> <u>mountainous</u></p> <p>Note: In using a dot before or after the indicator, the quality (adjective) before an ACTION f.i. <u>mixable</u> or after the ACTION f.i. <u>mixed</u> is indicated. Both VALUE and ACTION indicator can be used, or in a simplified manner, only the VALUE indicator with dot before or after.</p>  <p><u>mixable</u> <u>mixable</u> <u>mixed</u> <u>mixed</u> <u>dividable</u> <u>divided</u></p> <p>Note: The symbol in enlarged size standing before other symbols, indicates the <u>adjectival noun</u>. The dot before or after serves as indicated.</p>  <p><u>conform</u> <u>The Confor-</u> <u>The Much-</u> <u>The Mixture-</u> <u>The Mixing-</u></p> <p> <u>mity</u> <u>ness</u> <u>likeness</u> <u>ness</u></p>





























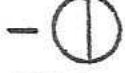





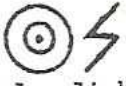










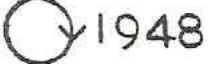





<p>Symbol element and meaning</p>	<p>Derivation and combination examples and their respective meanings (underlined)</p>
<p><u>∇</u> EVALUATION (continued)</p> <p>see page referen-ces on foregoing page. The symbols on this page are explained in chapt. p. 375ff.</p> <p>see also index</p>	<p><u>∇</u> <u>∇</u> <u>∇</u> <u>∇</u> <u>∇</u></p> <p><u>The Mixability</u> <u>The Mixedness</u> <u>The Divisibi-</u> <u>lity</u> <u>The Divid-</u> <u>edness</u> <u>The Mountain-</u> <u>ousness</u></p> <p>Note: The indicator symbols standing alone indicate their meanings:</p> <p><u>∇</u> <u>^</u> <u>></u> <u><</u> <u>></u> <u><</u> <u>∇</u> <u>∇</u> <u>∇</u> <u>∇</u> <u>∇</u> <u>∇</u> <u>∇</u> <u>∇</u></p> <p><u>The Value</u> <u>to eva-</u> <u>luate</u> <u>The Ability</u> <u>The Ability</u> <u>can</u> <u>can</u> <u>able</u> <u>active</u> <u>passive</u> <u>being able</u> <u>being able</u> <u>to act</u> <u>to stand</u> <u>actively</u> <u>ACTION</u> <u>passively</u></p> <p>Note: It should be understood that in actual writing of whole sentences it is not necessary to put indicators on top of other symbols in most cases. The natural word order Agent-Act-Object and the context makes it usually clear, what is meant.</p>
<p><u>)</u> <u>(</u> TIME Symbol indica-tors for the tenses.</p> <p>see explanation special chapter p. 107, 317ff.</p> <p>These symbols explained p. 323</p> <p>see chapter p. 341ff</p> <p>see also index</p>	<p><u>?)</u> <u>)</u> <u>(</u> <u>(?)</u> <u>)</u> <u>)</u> <u>(</u> <u>(</u></p> <p><u>Past</u> <u>Present</u> <u>Future</u> <u>then</u> <u>ago</u> <u>now</u> <u>then</u> <u>hence</u></p> <p>Note: Written in small size and put on top of other symbols, these symbols indicate the past, present and future of ACTION words. However it is not necessary to put the ACTION and TIME indicators together. One indicator will suffice in most cases.</p> <p><u>)</u> <u>(</u> <u>)</u> <u>^</u> <u>(</u> <u>∇</u> <u>∇</u> <u>∇</u> <u>∇</u> <u>∇</u></p> <p><u>have mixed</u> <u>shall mix</u> <u>have</u> <u>adding</u> <u>shall</u> <u>added</u> <u>now</u> <u>add</u></p> <p>Note: By putting a small question mark on top of symbols, we indicate the conditionalis. Again it is not necessary to put more indicators on top for instance for the present.</p> <p><u>)?</u> <u>?</u> <u>(?)</u> <u>∇</u> <u>∇</u> <u>∇</u></p> <p><u>would have</u> <u>would mix</u> <u>would mix</u> or may, might mix <u>mixed</u> <u>now</u> <u>in future</u></p> <p>Note: By adding the number 1 to the ACTION indicator, we get those verbal nouns, which express a <u>single</u> ACTION.</p> <p><u>^</u> <u>1^</u> <u>^</u> <u>1^</u> <u>∇</u> <u>∇</u> <u>∇</u> <u>∇</u></p> <p><u>turning</u> <u>1 turn</u> <u>The Turning</u> <u>The Turn</u> <u>rotating</u> <u>1 rotation</u> <u>The Rotating</u> <u>The Rotation</u></p> <p>Note: These symbol derivations and combinations conclude the "grammar rules" of semantography shown in the foregoing pages.</p>









































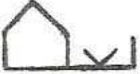

Symbol element and meaning	Derivation and combination examples and their respective meanings
<p>Line elements for the composition of geometrical outline meanings.</p> <p>see explanation p.107 and chapter 276ff</p>	 <p>line plane space over above under below before in front after behind</p>  <p>straight to straighten THING rod, pole make, become straight</p>  <p>straight curved around self other</p>  <p>right left superior man inferior man limits to limit limited</p>  <p>long short far near to measure ruler deep shallow</p>  <p>big small high low wide narrow thick thin</p>  <p>between together open closed to close enclosure etc.</p>
<p><u>The human senses</u></p>  <p>eye vision</p> <p>see explanation special chapter p.285ff see also index</p>	<p>The following symbol elements indicate the human senses and their activities. A great many words and innumerable synonyms cover this part of the dictionary.</p>  <p>eye to see visual clear (see through) awake (open) asleep (closed)</p>  <p>seem seemingly colour look out! more attention picture (eye & earth) glance, tive look</p> <p><u>In numbering the 7 colours of the rainbow we get:</u></p>  <p>01 red 02 orange 03 yellow 04 green 05 blue 06 indigo 07 violet</p> <p><u>With international colour chart numbers</u></p>  <p>00 black 45 green-blue (127) white (sun) (139) Cerise (44) English vermilion (87) Khaki Persian blue</p>







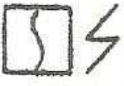


















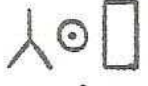






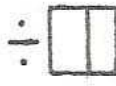
















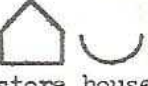

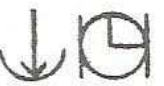


Symbol elements and meaning	Derivation and combination examples and their respective meanings					
<p>𐄂 ear hearing</p> <p>see special chapter p. 288 and index also p.360</p>	<p>□ 𐄂 ear</p>	<p>^ 𐄂 to hear</p>	<p>∨ 𐄂 auditory</p>	<p>𐄂! listen!</p>	<p>𐄂d music (note)</p>	<p>𐄂𐄂 listener</p> <p>𐄂𐄂 bridge</p> <p>𐄂𐄂 bridging lan- guage, translate</p>
<p>𐄂 nose smell</p> <p>see p. 289 and index</p>	<p>□ 𐄂 nose</p>	<p>^ 𐄂 to smell</p>	<p>∨ 𐄂 olfactory</p>	<p>𐄂 odor, smell (nose & earth)</p>	<p>— sky (see later)</p>	<p>𐄂 air</p>
<p>○ mouth speech</p> <p>see special chapter p.291ff and index</p> <p>p.289 and index</p>	<p>□ ○ mouth</p>	<p>^ ○ to speak tell, say,</p>	<p>∨ ○ verbal</p>	<p>○↔ discussion</p>	<p>𐄂○ speaker</p>	<p>○! cry</p> <p>○!! shout</p> <p>○!!! yell</p> <p>○d song (musical note)</p> <p>○→← greeting (speech at meeting)</p> <p>○+! admittance yes!(positive)</p> <p>○-! denial (no, negat)</p> <p>-○ speechless (minus s.)</p> <p>□○ open speech (publicly)</p> <p>□○ secret privat</p> <p>𐄂○ private secretary</p> <p>□ ○ food (mouth & earth)</p> <p>^ ○ to eat</p> <p>○/𐄂 taste</p> <p>𐄂○ breath</p> <p>𐄂○ to exhale</p> <p>𐄂○ spitting etc.</p>
<p>∨ hand touch</p> <p>p.290,291 and index</p>	<p>□ ∨ hand</p>	<p>^ ∨ to touch</p>	<p>∨ ∨ tactile</p>	<p>∨! slap</p>	<p>∨!! hit</p>	<p>∨!!! punch</p> <p>⊕ tool, instrument (thing in hand)</p> <p>⊕↑ lifter jack</p> <p>⊕d musical instrument</p> <p>⊕⚡ electrical tool</p> <p>⊕⚡ telephone apparatus (mouth & ear)</p>



















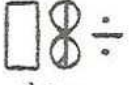
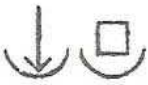



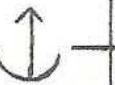











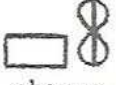
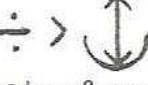









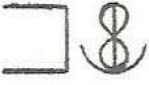
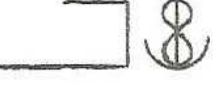
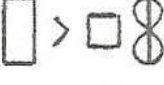
Symbol elements and meaning	Derivation and combination examples and their respective meanings
<p> mind outline of skull</p> <p>see special chapters p. 307ff, 310ff, 312ff and index</p>	<p> conscience</p> <p> reason</p> <p> emotion</p> <p>the whole mind</p> <p> emotion passion instinct, etc.</p> <p> reason rational thought</p> <p> conscience thought</p> <p> conscience</p> <p>or</p> <p>Unconscious  Subconscious  Precon- scious  Conscious of emotions  Conscious of reason  Conscious of conscience </p> <p> brain</p> <p> thinking thought</p> <p> thoughtful</p> <p> doubt</p> <p> certainty (opposite)</p> <p> opinion (mouth)</p> <p> proba- bility</p> <p> improba- bility</p> <p> guess</p> <p> good</p> <p> bad</p> <p> tolerance</p> <p> interest</p> <p> strong interest</p> <p> observation (eye)</p> <p> purpose</p> <p> proposal voiced purpose</p> <p> opposition</p> <p> worries troubles</p> <p> progress</p> <p> spite courage</p> <p> success</p> <p> wish, desire (flame)</p> <p>see p. 429 and index</p> <p> to lead, govern,</p> <p> state (flag on territory)</p> <p> to govern (see later)</p> <p> state</p> <p> use, useful (tool symbol)</p> <p> security (roof)</p> <p> select, elect eye divid. many</p> <p> will</p> <p> individual (see later)</p> <p> refusal (stop)</p> <p> permission (through)</p> <p> decision</p> <p> memory experience</p> <p> forecast prophecy</p> <p> brain part</p> <p> to moralize</p> <p> morally</p> <p> conscientious</p> <p> tolerance</p> <p> right</p> <p> wrong</p>

Symbol elements and meaning	Derivation and combination examples and their respective meanings
<p>  auxiliary symbol for emotion feeling passion see special chapter p. 303ff and index </p>	<p>  heart  to feel  emotional  joy, happiness  sadness  much joy jubilant  surprise  sensation  excitement  humour (mouth)  laugh  haughty proud  humble meek  freedom  oppression  harmony  much emotion  passion ecstasy  attraction  repulsion  feeling of opposition  anger, fury much f.o.opp.  luck (plus)  cruel (sword)  hunger feeling: minus food  behaviour Action symbol  play happy work  rest (earth)  peace (world) </p>
<p>  earth see special chapter p. 252 and index </p>	<p>  earth  sky  world  lightning  thunder  air (nose)  wind  storm 60 miles/hour  place  water (see later)  ground fog  low ceiling  spring  seed </p>
<p>  water see p. 232ff and index </p>	<p> top _____ writing lines _____ bottom _____  water  cloud on sky  water on ground  lake much w.  ocean m.m.water </p>



























































Symbol elements and meanings	Derivation and combination examples and their respective meanings
<p>  water (continued) see special chapter p. 252ff and index also p. 244, 245 </p>	<p>  rain  steam  snow  freezing  thawing  hail  river  current (much)  rivulet (little)  cloudburst (much)  island </p>
<p>  sun see special chapter p. 237ff and index p. 273ff p. 410, 411 and index p. 285, 411 and index </p>	<p>  sun  to sun  sunny  sunrise  morning  day  sunday  monday  saturday  week  spring  winter  day of joy holiday  year (full cycle)  individual life  lifeless minus life  light (eye)  darkness  weather  change  development  elec. light </p>
<p>  moon see special chapter p. 257 and index p. 273 </p>	<p>  night  moon rise  evening  month  full moon  January For international calendar purposes  Autumn,  Wednesday, 26.  Day of September  Year 1948 </p>
<p>  star p.273 and index </p>	<p>  starry  constellation many stars  comet  twin star </p>

Symbol elements and meaning	Derivation and combination examples and their respective meanings
<p>time auxiliary symbol</p> <p>see p.239, 363, 369 381 and index</p>	  <p>to time watch</p>  <p>watch</p>  <p>wrist watch</p>  <p>watch for hand</p>  <p>17.45 5.45 p.m.</p>  <p>early (before)</p>  <p>late (after)</p>  <p>hour</p>  <p>minute</p>  <p>second</p>  <p>time of departure</p>  <p>time of arrival</p>  <p>limits</p>  <p>time interval</p>
<p>mountain and other earth formations</p> <p>see p. 59, 233, 247, 251, 252 and index</p>	 <p>mine</p>  <p>mining</p>  <p>plain, valley</p>  <p>range</p>  <p>mt. height 3000 m</p>  <p>hill mt., low</p>  <p>mound mt., much low</p>  <p>stone</p>  <p>rock, boulder (big)</p>  <p>sand grain</p>  <p>dust, powder (small)</p>  <p>hole</p>  <p>waterhole</p>
<p>roof cover</p> <p>see p. 243, 245, 254, 255, 275 and index</p>	  <p>roof cover</p>  <p>to cover to protect</p>  <p>protector police</p>  <p>house dwelling</p>  <p>to house to dwell</p>  <p>dweller</p>  <p>street (pointer)</p>  <p>floor</p>  <p>chimney (pointer)</p>  <p>village</p>  <p>town</p>  <p>backyard</p>  <p>post office (letter)</p>












































Symbol elements and meaning	Derivation and combination examples and their respective meanings
<p style="text-align: center;"></p> <p style="text-align: center;">fire</p> <p>see p. 251, 372, 392, 454 and index</p>	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  to fire </div> <div style="text-align: center;">  to set fire to an object (active) </div> <div style="text-align: center;">  inflammable (adjective) </div> <div style="text-align: center;">  open fire </div> <div style="text-align: center;">  stove </div> <div style="text-align: center;">  electric stove </div> </div> <div style="margin-top: 10px;">   <p>to cross out fire (extinguish) flame (part)</p> </div>
<p style="text-align: center;"></p> <p style="text-align: center;">to cross out to blot out</p> <p>p. 106 and index</p>	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  cross, blot, extinguish, destroy </div> <div style="text-align: center;">  ruin </div> <div style="text-align: center;">  deaf (ear) </div> <div style="text-align: center;">  dumb (mouth) </div> <div style="text-align: center;">  corpse (dead) </div> <div style="text-align: center;">  wreck abandoned ship </div> </div>
<p style="text-align: center;"></p> <p style="text-align: center;">writing tool</p> <p>p. 360, 361</p>	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  pen pencil </div> <div style="text-align: center;">  to pen to write </div> <div style="text-align: center;">  fountain pen (pointer) </div> <div style="text-align: center;">  ink (liquid) </div> <div style="text-align: center;">  ink pen </div> <div style="text-align: center;">  writer </div> </div>
<p style="text-align: center;"></p> <p style="text-align: center;">paper page</p> <p>see p. 360, 361 and index</p>	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  reading (eye) </div> <div style="text-align: center;">  reader </div> <div style="text-align: center;">  spoken reading </div> <div style="text-align: center;">  story read aloud </div> <div style="text-align: center;">  printed story </div> <div style="text-align: center;">  line </div> <div style="text-align: center;">  letter part of line </div> </div> <div style="margin-top: 10px;">       <p>book chapter (part) paragraph (part) cover of book to repeat duplicate</p> </div>
<p style="text-align: center;"></p> <p style="text-align: center;">vessel</p> <p>see sp. chapters p. 364ff, 380ff and index</p>	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  hold vessel, bowl </div> <div style="text-align: center;">  to hold </div> <div style="text-align: center;">  capacious </div> <div style="text-align: center;">  Capacity </div> <div style="text-align: center;">  hand </div> <div style="text-align: center;">  grip, hold </div> </div> <div style="margin-top: 10px;">       <p>to take in, receive, get, offer, let go to give out to exchange (in exchange for) for goods store house</p> </div> <div style="margin-top: 10px;">     <p>to lend, let, loan, lease, etc. (time interval) to borrow, hire rent, take a loan hold f. books bath (water)</p> </div>




























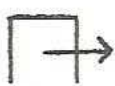








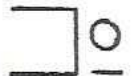
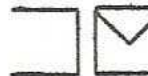


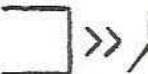
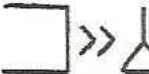















Symbol elements and meaning	Derivation and combination examples and their respective meanings
<p style="text-align: center;">  vessel (continued) see special chapter p. 374, 377 and index </p>	<p style="text-align: center;">  mind  knowledge house of mind  to take in knowledge to learn  to give kn. to teach, to educate  learned educated  teacher educator  school  to understand </p>
<p style="text-align: center;">  money Rod of Mercurius see special chapters p. 380ff, 383ff, 389ff, 395ff, and index </p>	<p style="text-align: center;">  business  business man  company (many men) | | company, limited limits  to pay m. payment  to receive money  docket receipt, paper  paper on money  share (division)  reception of goods  credit to receive m. in future  debit to pay mon. in future  profit (plus)  loss  assets  liabilities  buy, pur- chase (first m. then thing)  sell  safe  bank  paper money  disc  coin  Silver Ag  Copper Cu  cheque  rate of ex- change  account (paper)  ledger (book)  overdraft (minus)  safe  penniless custody minus mon.  bankrupt crossed out  price mon. f. goods  dear much price  business house  office (room)  shop (street)  invoice paper about sale etc. </p>




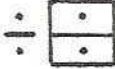
























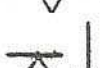











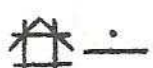

















Symbol elements and meanings	Derivation and combination examples and their respective meanings
<p>⊗ wheel</p> <p>see special chapters p. 356ff, 393 and index</p>	<p> wheel to wheel earth to move movement mobile quick much move. </p> <p> jerk push pull thing carry, transport standstill zero motion </p> <p> to send off to fetch bring speed move/time travel journey traveller </p> <p> car vehicle train railway railway station table (see later) platform </p> <p> sun (energy) machine electric machine engine wings flying mach. (see later) </p> <p>Examples of auxiliary outline symbols</p> <p> steam vehicle (water up) steam engine electric vehicle tram train combustion veic.(fire) motor-car </p> <p> airplane jet-plane (out symb.) food dining car sleeping car (bed, see later) </p> <p> mail car (letter) baggage car ticket passport book-travel-state (see lat.) </p>
<p>P flag</p> <p>see chapters p. 476ff, 480ff, 429, and index</p> <p>see p. 336, 615 and index</p>	<p> earth state country leading country governing state governor of country </p> <p> government (group of men) Prime Minister First man of Government </p> <p> First man of state president, king election in state (see p. 7) P. 126 foreign state (outside) foreign country home c. (in) </p>






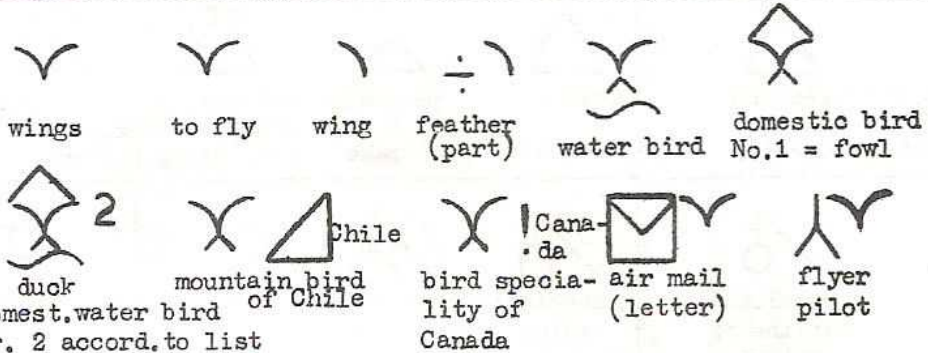

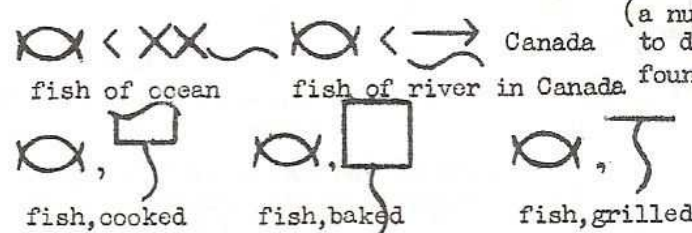

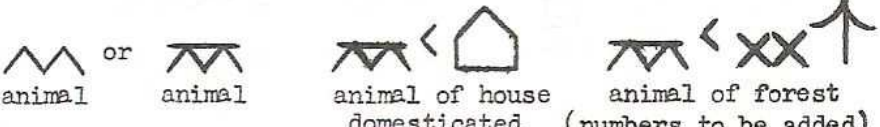
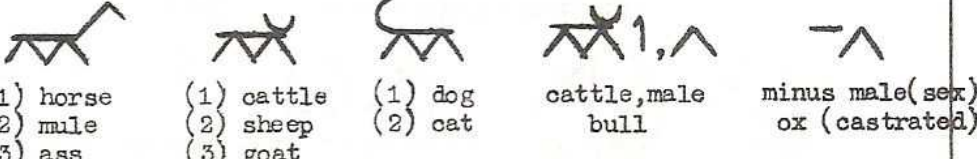


Symbol elements and meaning	Derivation and combination examples and their respective meanings						
 male human being  female	 man  to man  manly  womanly  couple  group board, committee						
see special chapters p. 404ff, 412ff, 474ff, and index	 citizen (earth)  citizen of state  group of citizen  nation						
 elector voter  electee deputy  roof  father  mother  birth							
 married couple  parents  husband  wife  bridegroom husband, before							
 son  daughter  brother  sister  marriage  engagement (before)							
 wedding day 1st day, marr.  widower husband, after  divorcee husband, divid.  male orphan son minus father							
 grandfather father of moth.  grandmother mother o. fath.  grandmother mother of moth.  grandson son of son							
 brother of father, Uncle on fathers side  daughter of sister niece on sisters side  mother o. wife mother-in-law on wifes side  husband of sister brother-in-law on sisters side							
 family in t. wider sense  family relation to be related  a male relative							
 father  to father  fatherly  mother  to mother  motherly							
 male in general  female in general  I  we  you  he  she  they it							


































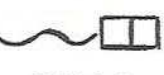

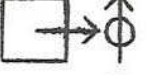


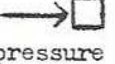
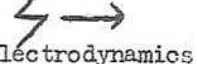
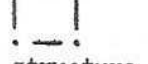






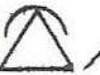



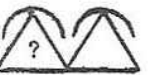
(see also next page)

Symbol elements and meanings	Derivation and combination examples and their respective meanings					
<p style="text-align: center;">  individual </p> <p>see special chapters p. 404ff, 532, p. 685ff and index</p>	<p style="text-align: center;"> ₁ I </p> <p style="text-align: center;">  standing person </p> <p style="text-align: center;">  arm pointers: </p> <p style="text-align: center;">  needy individual (falling, in need of support) </p> <p style="text-align: center;">  feeling of need necessity </p> <p style="text-align: center;">  sun </p> <p style="text-align: center;">  may be might be </p>	<p style="text-align: center;"> ₂ you </p> <p style="text-align: center;">  to stand </p> <p style="text-align: center;">  strong </p> <p style="text-align: center;">  to need (falling, in need of support) </p> <p style="text-align: center;">  rational thought necessity </p> <p style="text-align: center;">  life to be, exist </p> <p style="text-align: center;">  may be might be </p>	<p style="text-align: center;"> ₃ he </p> <p style="text-align: center;">  weak person (knees bent) </p> <p style="text-align: center;">  to make, become strong </p> <p style="text-align: center;">  needy necessary </p> <p style="text-align: center;">  conscience thought of necessity </p> <p style="text-align: center;">  living being </p> <p style="text-align: center;">  flower (see later) </p>	<p style="text-align: center;"> ₃△ she </p> <p style="text-align: center;">  weak </p> <p style="text-align: center;">  to force (active) </p> <p style="text-align: center;">  Need adjec.noun </p> <p style="text-align: center;">  pain </p> <p style="text-align: center;">  to be, exist inanimated </p> <p style="text-align: center;">  young new </p>	<p style="text-align: center;"> ₁ X we (plural) </p> <p style="text-align: center;">  sitter </p> <p style="text-align: center;">  to force by power of mind </p> <p style="text-align: center;">  helper (being a support) </p> <p style="text-align: center;">  mutual help </p> <p style="text-align: center;">  inanim. thing </p> <p style="text-align: center;">  grown-up </p>	<p style="text-align: center;"> ₃ X they </p> <p style="text-align: center;">  to sit </p> <p style="text-align: center;">  normal, not weak </p> <p style="text-align: center;">  to be forced </p> <p style="text-align: center;">  to be (in mind) </p> <p style="text-align: center;">  to be (in mind) </p> <p style="text-align: center;">  old (opposite) </p>

Symbol elements and meaning	Derivation and combination examples and their respective meanings						
 individual p. 410ff and index	 to live  to cross, blot out  to die  to kill or  dead  make, become lifeless, dead						
 p. 531 index legs & feet	 to go  1 step  leg  foot  sole  toe						
 p. 531 index head	 face  chin  neck  profile						
 p. 531 index trunk	 shoulder  chest  stomach						
 opening opened enclosure  enclosure see p. 236, 247, 271, 272, 369, and index	 door  entrance  exit  fire-exit  curtain  room  wall  wall covering  room open to street  floor covering  bar (drink glass)  dining r. (food)  cable office  bath room (vessel)  shower room (rain)  room for man  room f. ladies  room maid  steward						
 bed p. 370, 390, and index	 mattress  headrest  fabric (see later)  bed linen  blanket cover fabric f. bed						
 chair p. 117, 248, 249	 to sit  easy chair  sofa  table top  edge  leg						

Symbol elements and meanings	Derivation and combination examples and their respective meanings
 p.117 index box container	 wardrobe  chest of drawers  single drawer(part)  shelf
 p.359, 419, index window	 prison window punishment  prison  criminal man hav. been jailed  captive  prisoner of war (crossed swords)
 sword, knife cutter p.418ff index	 sword, knife  to cut  the cut the THING cut  attack  to invade  defense  war fight  victory (plus)  defeat (minus)  soldier fighter
 p.366 514,515 index scales balance	 to weigh  to judge (mind)  judge  bill, law (book)  decimal scales  heavy
 fabric see chapter p.390ff and index	 to make (see later)  to weave make fabric  table cloth  carpet floor cover  cover (roof)  clothes  clothes for man  cloth, f. young  for babies  against rain  overcoats  underwear  trousers (legs)  socks fabric f. foot
 plant see chapter p. 455ff and index	 flower Numbers accord, a list specifies different species.  garden  grass  meadow  grain  field  vegetables consist. o. leaves  fruit  berry  vegetable fruit above, below ground  vegetable  roots  mushroom

Symbol elements and meaning	Derivation and combination examples and their respective meanings
 plant see p. 154, 554, index	 growth individual speech metaphor figure of speech wing poetical metaphor flowery speech
 tree p. 244, 274, and index	 trunk branch (part) forest very many shrub pine other tree species denoted by other numbers (list)
 bird see special chapter p. 453 and index	 wings to fly wing feather (part) water bird domestic bird No. 1 = fowl duck domestic water bird of Chile Nr. 2 accord. to list mountain bird of Chile bird speciality of Canada air mail (letter) flyer pilot
 fish see p. 454, and index	 fish of ocean fish of river in Canada (a number to be added to denote the species found in Canadian rivers.) fish, cooked fish, baked fish, grilled
 animal quadruped see p. 459ff and index	 animal animal animal of house domesticated animal of forest (numbers to be added) For informations to farmers special auxiliary symbols could be drawn up, as for instance:  (1) horse (2) mule (3) ass (1) cattle (2) sheep (3) goat (1) dog (2) oat cattle, male bull minus male (sex) ox (castrated)
 insect hexaped	 bee domest. ins. animal undermining house (1) mouse (2) rat insect undermining house (1) termite (2) ant, etc. insect undermining crops (1) locust etc. insect undermining fabric (1) moth (2) silverfish

Symbol element and meaning	Derivation and combination examples and their respective meanings
 insect (continued) p.460ff and index	 to cross out insects which destroy  insects which are destructive  destroying insects  chemical destroyer insecticide Auxiliary symbols for special species could be formed and numbers attached. Latin names could be also used for plants, animals and insects, etc.  snail  butterfly  snake  worm(below earth) etc.
 p.111 Creation 714ff Nature 725ff Creator	 created  man-made  science, philosophy, mind templating nature  design, con-plan nature  designer planner  supra-natural ^to create ^to make
 chemical outline of retort see special chapter p. 502 - 522 and index see p.249ff p.462ff and index see p.516, 607	 chemical thing  chemical process  THING  solid THING  metal  material raw(earth)  wood mat. of tree  crystal  gas  thermo-meter  mano-meter  funnel filtration  test-tube  calibrated cylinder Other chemical and technical meanings can be expressed by combination of foregoing symbols or by special outline symbols  solution  liquid  solidifying of metal  gas-filled  evacuating  physics(measuring fall)  force  pressure  electrodynamics  structure  pair of compasses(geometry)  geometry of house  hammer  spoon  fork  pot etc.  science of chemistry  science of mathematics  truth  doubt  scientific theory

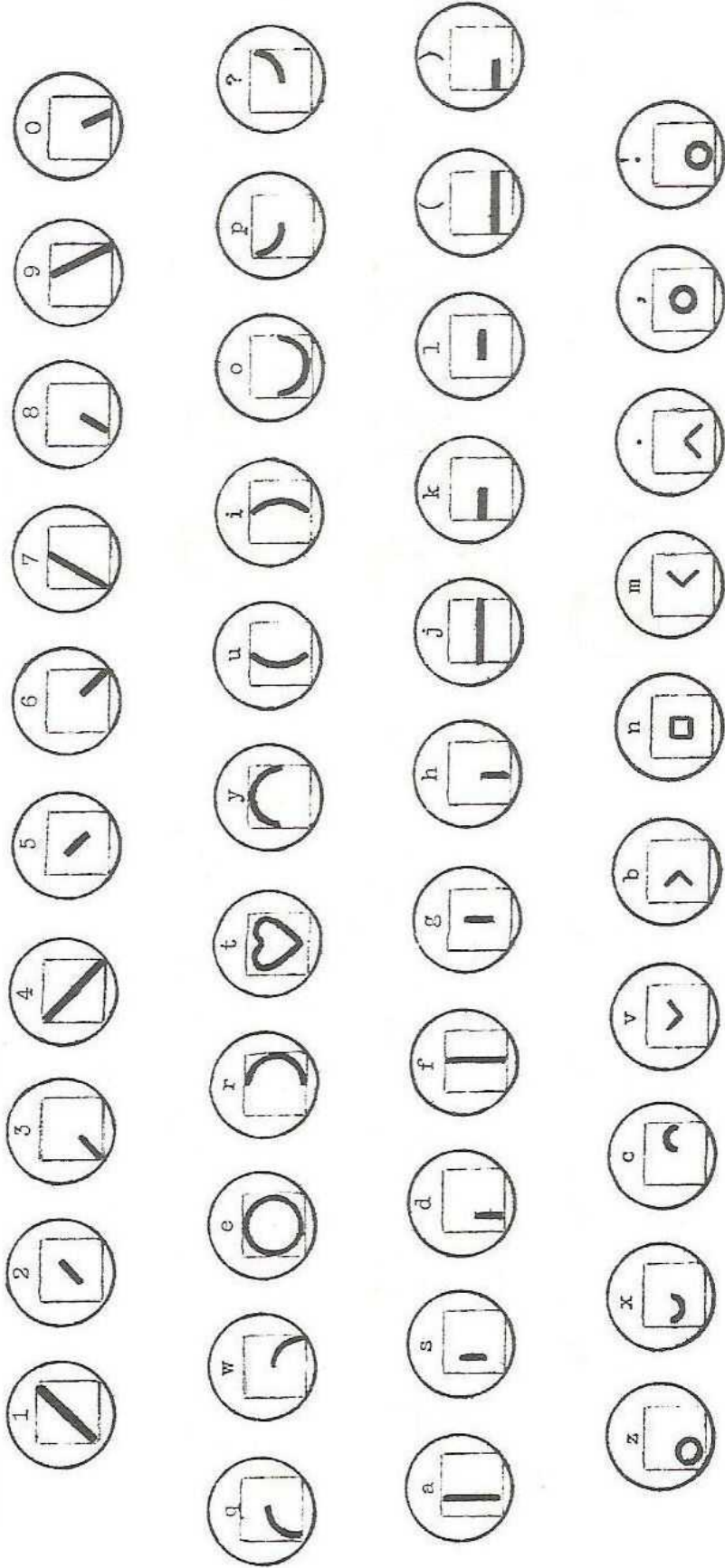
A number of these 70 symbol elements shown in the foregoing 19 pages can be reduced to a combination of more basic symbols. This is demonstrated in the pages 462 - 465. However, it is often more convenient to devise a simple auxiliary outline symbol instead of a combination of basic symbols.

(see also pp 89 and 226ff of this edition)

(2)

DRAWING ON A TYPEWRITER KEYBOARD

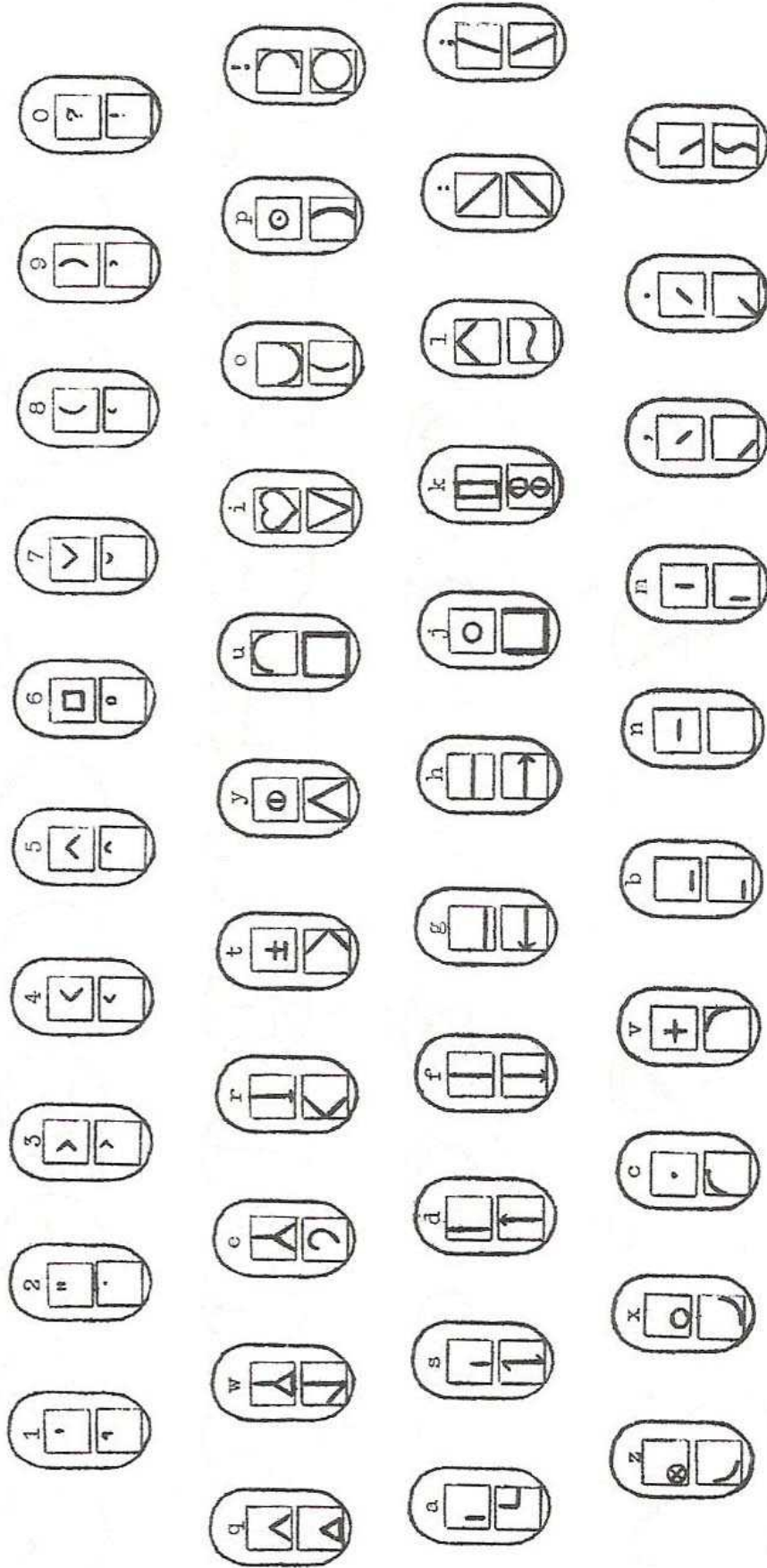
showing the arrangement of keys for the typing of the usual letters of the alphabet, etc., plus the typing of various lines for the composition of symbols.



The thinly lined squares shown on the keys do not show up on the paper. They indicate only the position of the straight or curved geometrical line with regard to the available typing space. By shifting the cylinder, the geometrical line may be typed in another part of the square space. The various geometrical lines may be placed on the keys in a different manner as shown above.

DRAWING ON A TYPEWRITER KEYBOARD (8)

showing the arrangement of keys on a two shift keyboard, (each hammer carrying 3 types), for the typing of the usual letters of the alphabet, numbers, etc., plus the typing of geometrical lines for the composition of symbols, as well as the typing of composite symbols (on the second shift).

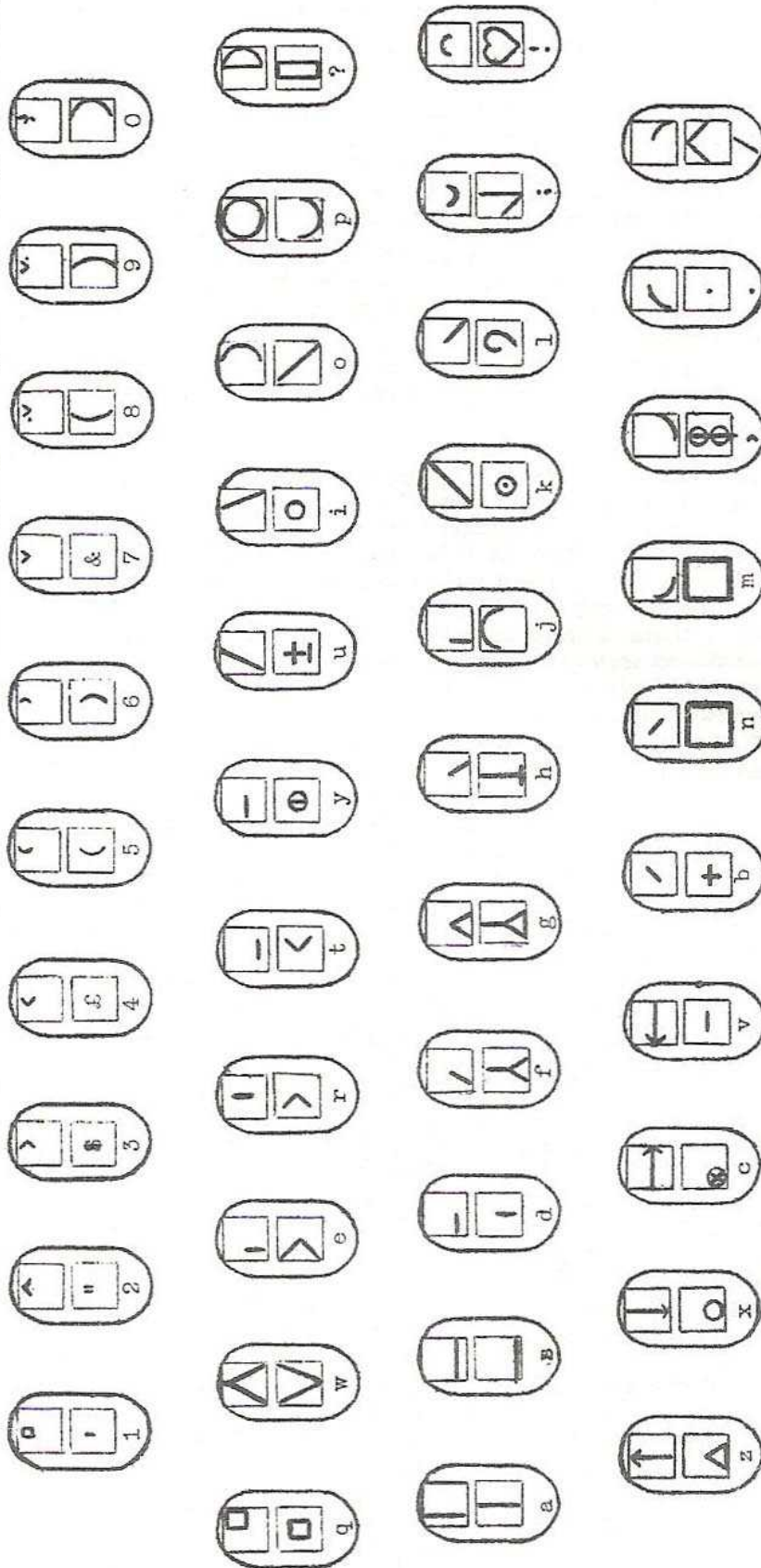


The thinly lined squares on the keys do not show up on paper. They indicate only the position of the geometrical lines with regard to the available typing space, which is a square. Shifting of the cylinder brings the lines or symbols into different parts of the typing space. Lines and symbols may be arranged differently, as well as circular or square keys employed.

(9)

DRAWING ON A TYPEWRITER KEYBOARD

showing the arrangement of the keys on a two shift typewriter (each hammer carrying 3 types), for the typing of the usual letters of the alphabet, numbers, etc., plus the typing of geometrical lines for the composition of symbols (first shift) and the typing of composite symbols (second shift).



The thinly lined squares on the keys do not show up on paper. They indicate only the position of the geometrical lines with regard to the available typing space, which is a square. Shifting of the cylinder brings the geometrical line into another part of the square space. Lines and symbols may be arranged differently, as well as circular or square shaped keys may be employed.

A few examples

"Indeed it is doubtful if a people learned in semantics would tolerate any sort of supreme political dictator. Ukases would be met with a flat "No comprehendo" or with roars of laughter. A typical speech by an aspiring Hitler would be translated into its intrinsic meaning, if any. Abstract words and phrases without discoverable reference would register a semantic blank, noises without meaning.

Nonscientists often meet new experience without humility, in an arrogant determination not to be caught napping. They jeer at Fulton's steamboat, laugh heartily at a horseless carriage operated by gasoline, presently they are going to tell you that semantics is nonsense.

It is a curious story I have to tell you. I shall not tell it very well, because it is almost as hard to investigate words with words as to lift oneself by one's boot-laces."

Stuart Chase (26)

This chapter is written for those readers who have not the time to read the whole book. It may well jeopardise all the efforts ^{which} I have put in this idea throughout nearly seven years. For a reader who goes diligently through 450 pages of my book and then goes into this subject (sketchily outlined in this chapter, and explained at length in another 150 pages) it may seem natural, almost self-explanatory. For a reader, who has not read the whole book, this chapter may be enough to dismiss the whole semantics of semantography as nonsense. But I think I have to write this introductory chapter and I hope for the utmost benevolence and understanding on the part of you.

Just imagine that somebody would have invented a gadget, which enables you almost at a glance to see the meaning, if any, of a word, a phrase, or a whole sentence. Such an instrument might have an effect more wholesome than that of all technical gadgets together. When a discussion starts anywhere - at home, between man and wife, at the shop, the office, the pub, the cafe, or at conferences, committee meetings, assemblies, parliaments, etc. etc. that apparatus is put on a table in full view of everybody, and when the speaker says something which is vague in meaning, or even meaningless, the needles of the meters would swing violently, and an alarm bell would start to ring - just imagine the effect. A wholesome silence may descend upon the world. People would only say things, which are matters of fact, which refer to real THINGS in ACTION - and above all, they would refrain ^{from} using words, which are meaningless and which have only one effect: to hurt other people's feelings. Well, we may assume that (to say a figure) 90% of all the heated controversies and fierce debates, which lead nowhere, would cease altogether and with this all the bitterness, the bad feelings, the estrangements, not to speak of the organic disturbances which follow in their wake, the gastric ulcers, the agina pectoris, (if we accept the findings of the doctors about psychogenic influences) or at least dyspepsia.

Well, such an invention would be a grand thing, and, considering the incredible gadgets which man has invented already, it may one day come about. But - and this is essential - in order to invent a calculating machine, man must have learned before, how to calculate. He must have learned how to operate the symbols of the numbers, the meaning of 1 2 3 4 5 6 7 8 9 and especially 0, furthermore the meanings of the operations + - x ÷ etc. Only then could he go a step further.

Well, semantography should be considered as a small contribution in regard of language and the meanings of the words. On the first page of this book you will find the saying of the physicist Sir Richard Paget who thinks that our "muddled way of thinking" may be "due to the simple fact that - in the matter of thought symbolism we are still much in the same state of confusion as the Romans were... multiplying MDCCIX by LVII." From this point of view must you consider all what I am going to say. Try to understand a chemist who "gropes in the dark" to find a similar symbolism ^{like} that which has so successfully been employed in chemistry and medicine.

All this about a symbol writing covering all languages, expressing the meanings of words, is just a crude beginning, a stammering, an almost hopeless venture to penetrate the "thick jungle" of our words and thoughts. It should give you just an idea what could be done in this field, and what you might do yourself to become a pioneer and to go forth and ^{make} your own contribution, until this idea is put on a broad basis, until children learn to turn their scribbling into a writing, which can be understood by other children of any language, and which ^{may} help them to become citizen of a better world.

Most words of all languages could be classified as belonging to one or two or all of the three classes, which we have symbolized as follows



Examples: a stone is a chemical THING; it's fall a physical ACTION. However the meaning of nicc and uly are human EVALUATIONS. A plumber is a THING, which perform the ACTION of plumbing. However, to feel, to think, to conclude refer to ACTIONS of our brain cells and human EVALUATIONS.

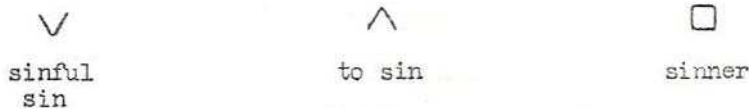
This classification tallies with our knowledge of the world around us, in which chemical THINGS perform physical ACTIONS in SPACE and TIME. Man, with his brain and his language, occupies a unique position in this world and these activities of Man, we have termed human EVALUATION. Mathematical numbers and operations are a group apart.

Man has learned to change the meaning of one word with reference to these 3 classes.



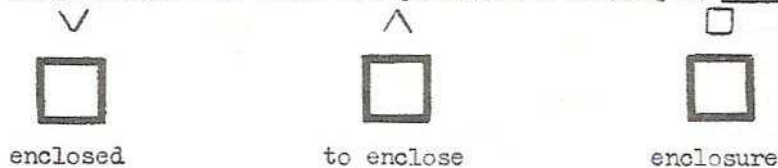
The meaning of man refers to a distinct chemical and biological entity in our world, a/ The meaning of manning a ship, a gun, a factory refers to the physical ACTIONS which men perform when handling a ship, a gun, a factory. The meaning of manly or (as it was formerly said) man-like is a human EVALUATION, different in different minds. It may mean anything good or bad, just as womanly. It is a vague meaning, and we must refer to distinct THINGS and ACTIONS if we want to clear up what you or I mean by this. In any case, this word comes from the original chemical THING man.

Now let us start with a human EVALUATION sinful, and its adjectival noun sin.



The original word is sinful, sin from which we derive the words for ACTION and THING. But now, the vague human EVALUATION is extended to the ACTION and the THING. Men differed throughout the ages about sinning and who is a sinner. Ultimately, the human EVALUATION of good and bad is bound up with these meanings, and this is expressed in the symbols which we will learn in later chapters.

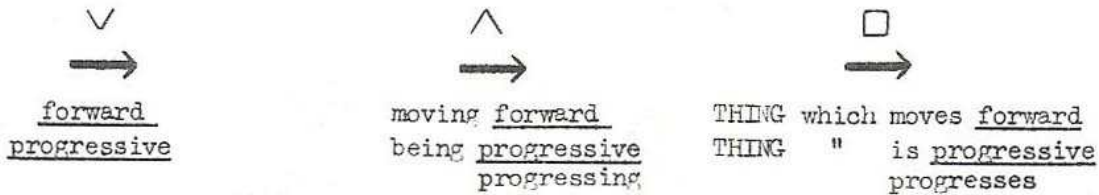
Now let us start from a meaning referring to SPACE. From modern physics we know that any meaning in SPACE must be relative, and to clear up what we mean, we must refer to a system of reference. Let us write the geometrical meaning of enclosed.



Now it may not become apparent at first sight, that the original meaning is vague. But an enclosure does not indicate a definite chemical entity of our world. Any THING could be an enclosure or could be not, depending on the system of reference. A fence can be termed an enclosure with reference to cattle, but it may be wide open with reference to rabbits. If we use a rabbit-proof fence, it will still be wide open with reference to ants. Even a hermetically sealed metal box may be wide open with reference to Helium nuclei, neutrons, X rays and ultra waves. The meaning "enclosed" depends on an EVALUATION.

Now, this relativity of spatial meanings is a far cry from the modern theory of relativity (of which you find an account in the chapter The Relativity of Space on page 144) On the other/ the discoveries of the great scientists in the fields of astronomy, biology, etc. etc. have invariably helped to clear up our muddled thinking in regard to these fields

Let us take another spatial meaning:



As said already in the discussion of the meaning of the arrow symbol on page 25: a group of persons facing different directions will progress forward in different directions, each person being a different system of reference. From this we must realize that the meaning of forward and progressive is a human EVALUATION which differs in different minds. Then we shall not be surprised to find that each political party from the extreme right to the extreme left calls itself progressive and on the forward move. And the man in the street is apparently not aware of this contradiction on the contrary. If he sticks to a political doctrine, this will be the ^{one} which is progressive, and he will take the word as having a meaning in itself. At present, the communists do everything to make this word a synonym for their doctrine and they denounce anyone who is not a communist as being "not progressive". The word has become an argument in itself.

Now every one of us "believes sincerely" (two human EVALUATION words) that he feels, thinks, and acts progressively. Each of us being his own observer and judging from his own system of reference is entitled to do so. But then, we judge other observers moving in space, whether they are progressive or not. And here is the fallacy which we commit, if we don't take into account what Einstein told us: the relativity of any directional movement. We think that our system of reference is the one favoured, the "right" one. From our point of view, some other observers move forward just as we do. However, a third party of observers move—as far as we could see—backward. But they would be much annoyed if we tell them so. They will tell us, that they are moving forward and that we are actually on the backward move. Remember the experience in a railway coach, when the other train starts.

Now millions of people believe that

Lenin was progressive \longrightarrow

Other millions of people deny this hotly. Lenin himself thought that he was progressive. And from his system of reference he thought that

Trotzky was progressive \longrightarrow

But communists of today think that

Trotzky was counter-progressive \longleftarrow

Trotzky himself believed of course that he was progressive to the very end.

Tito was progressive \longrightarrow but ^{now} the Cominform thinks that he tottered off \longrightarrow in some other direction, and soon they may denounce him as being regressive \longleftarrow . But of course Tito thinks that he is progressive \longrightarrow all the time.

When the bill for the nationalisation of the steel industry was presented in the British Parliament, there were the following utterances (splashed later over the front pages):

Sir Stafford Cripps:

"This bill is a step
 \longrightarrow
forward"

Winston Churchill:

"This bill is a step
 \longleftarrow
backward"

Each average newspaper reader applies his own system of reference to this interpretation (whether he is a shareholder, a general, a civil servant, an engineer, a ship builder, an employee, a worker's wife, or the small grocer near the factory gates). The words: forward and backward used as arguments in themselves are extremely misleading and we don't realize that they are meaningless unless we state in each particular case: where from? and where to? The bill may be a step forward \longrightarrow towards the filling of forms in duplicate, triplicate and quadruplicate. The bill may be a step forward \longrightarrow towards the standardization of screw threads. The bill may be a step forward \longrightarrow towards gigantic "bottle-necks". The bill may be a step forward \longrightarrow towards unification and allocation of large sums for steel research.

The general public being unaware of the utter vagueness of such terms, accepts them as having a meaning in themselves. But so do the rulers of states. Every spatial meaning is employed in much the same way.

Take the words far and near. In semantography they are symbolized by these lines



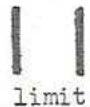
far



near

You realize that the distance between both lines is wholly arbitrary. So are the meanings. The mile to the railway station may be EVALUATED far by some persons and near by some other persons

Now take the word limit. Again a meaning in space. On the semantography typewriter it is typed with two long vertical lines of arbitrary distance



limit

Once people are taught these symbols, they learn too, that their meaning is relative, vague, ambiguous, and -when standing by themselves - almost meaningless.

Now, for "small talk" - it doesn't matter. However, when the fate of nations is at stake, it matters a great deal what words are employed. When Hitler assailed Czechoslovakia about the Sudetenland and Henlein made his speech on the 24th of April 1938

"The British and French Ministers in Prague called on the Czech Foreign Minister shortly after this to



"express the hope that the Czech Government will go to the furthest limit in order to settle the question".

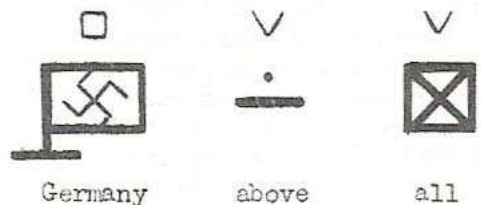
These were the official words according to Winston Churchill's great book The Gathering Storm (The Second World War, Cassell & Co). Is there any meaning in these words: "furthest limit"? And if there is, will not each person interpret it differently?

When Chamberlain came back from Munich, he waved a piece of paper in his hand and said: "I believe it is peace for our time." You will find the content of this paper in Churchill's book, and you may be surprised to learn that "Hitler read this note and signed it without demur". The text was set up by Chamberlain, Hitler did not alter it.

My training in semantography enables me to translate mentally anything I read into the symbols. Reading this agreement between Chamberlain and Hitler I understand why Hitler "signed it without demur". It is from beginning to end one long row of human EVALUATION words, which each person can interpret differently and the very same person differently to-morrow than today. With men trained in semantography, such self-deception may become impossible.

We believe that Hitler's maxim was: the bigger the lie, the more will the people believe it. But this our belief does not take into account that the German people is literate, clever and usually as rationally thinking as any other people. Suppose, Hitler would have told them that 2 + 2 = 5 or An elephant flies by night. These are terrific, gigantic lies, and if repeated millions of times in the papers and over the air, the German people would have swallowed them. But would they?

When you translate Hitler's sayings into semantography, you will realize why most of the German people believed them, but why Hitler himself believed what he said. The relevant words fall into that class which, in semantography, we have termed human EVALUATION. Let us write down one of the most important of German slogans



Germany

above

all

The reader must excuse that I plunge him directly into symbols, the lines of which may convey their meaning only after a diligent reading of the book. This is an introductory chapter only. Nevertheless, the symbols can be easily explained:



The symbol of a flag over the symbol for earth, territory gives us the symbol for state. This symbolizes all the THINGS which comprise that state. Then we add the particular flag.

(v)

The symbols for above and below are self-explanatory. However, we must realize that their meaning is vague and relative. It just depends where you or anybody else "draws the line". If you draw the line you must state clearly the system of reference: above the sea or above that house. The sea and that house are both chemical THINGS. But when we use human EVALUATION words, like: above consideration, above contempt, above all, it may mean anything.



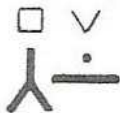
The symbol for all shows the multiplication mark within a restricted enclosure. It means many things, a multitude, but a restricted one. This symbol should have a semantical effect and is in line with the saying of E.T. Bell (74): "That wretched monosyllable 'all' has caused mathematicians more trouble than all the rest of the dictionary." But we do not even need this interpretation. We ask ourselves: "Do the words above and all denote a particular chemical THING or a particular physical ACTION?" The answer is no. Consequently we put the EVALUATION indicator on top.

Now, if Hitler would have said:

"Germany above all, measured from sea level."

the nonsense would be apparent. But a saying which contains EVALUATION words, without reference (above what? what all?) will be interpreted by anyone differently. If repeated a million times, it will become a "truth" in the minds of people, especially if they attach it to other EVALUATION words:

"Germany above all, in spirit, faith, thinking, soldierly qualities, race, 'blood', etc. etc. Soon the EVALUATION is directly attached to the human beings.



a Superior

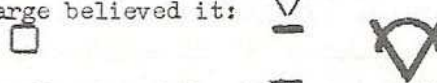


an Inferior

But where do you draw the line? Superior in what? Ah, in all! The Master Race, the Herren Klasse - so are meanings created which in the end brought utter devastation.

There is a famous English war-time novel which carries the title "THIS ABOVE ALL". It's a very moving story, but just ask ten people who have read it, what the title actually means, and you would get ten different answers.

However, such words in fiction are usually harmless, and the poet may freely use them. But it is quite different when the well-being of peoples is at stake, in war as well as in peace. For many decades German traders have repeated millions of times their great sales slogan, until the world at large believed it:



"German goods are of the highest quality." (Value)

The decisive words "highest" and "quality" are both human EVALUATION words, relative, vague and ambiguous. The statement may be true with reference to certain specified goods, and may be a lie with reference to other goods. The very fact that the same factory turns out knives of a high and of a very low quality gives the lie to the statement, that German goods are of the highest quality. But repeat such statements over and over again, and in the end the world outside Germany and the Germans themselves will believe it. They will be convinced that they are the best scientists, the best organizers, the best manufacturers, the best soldiers, the best race. On the one hand, this has a paralyzing effect on other nations, on the other hand, it makes the Germans believe that they can fight the whole world, and having made this human EVALUATION in their minds, they embark on it, once, twice and they might try it a third time. When it turns out that they are beaten in efficiency, in production, in scientific research, in precision instruments, in secret weapons, and even in courage, endurance, fighting spirit and all the soldierly qualities which they claimed for themselves, they refuse to face the facts and correct their EVALUATION. Their propagandists are soon at hand with another slogan: "The stab in the back" etc. etc.

Meantime such statements as the one above mean loss of markets for other nations and this means no bread and no happiness for millions of workers in other lands. Soon their propagandists counteract

"British goods are best."

Once you can examine every word with the simple rules of semantography, you realize that many advertising slogans in any language are just of the same type, and when repeated a million times in the papers and over the air, the people believe them. Take for

instance this:



"ABC Cigarettes taste better, because they are blended better."

When you have learned to write semantography, it will be easy for you to write down the above sentence. But you don't need to know each particular symbol. The few "grammar rules" of semantography are sufficient to analyze any statement.

Taste refers direct to a sense reaction, co-ordinated in the sense central station, the brain. The word because refers again to a brain activity, a reasoning about cause and effect. You may put the mind symbol on top of these words or the general evaluation symbol, referring thus to human EVALUATIONS which are different in different brains.

If smokers should decide that ABC cigarettes, on a first try, don't taste "better", they must be convinced by the cold logical reasoning of cause and effect, with the words: "because they are blended better".

Just imagine an assembly of the world's tobacco blenders, each trying to prove that his blend is "better". On this basis, different people will have a different opinion of what is "better".

When we realize that most fierce debates and controversies are fought with and about such vague EVALUATION words, we may get an idea what the teaching of semantography may mean for the peace of the family and the community. People would realize that it leads nowhere when such words are used, and they may then adopt the method of the scientist and the engineer: to talk in terms of chemical THINGS and physical ACTIONS and avoid as much as possible terms of human EVALUATION.

For this method the few "grammar rules" of semantography should be known. But the symbols themselves are devised in such a manner, as to help our understanding, and to help us to recognize that their meanings are relative and need further specification and the establishment of a system of reference. Here are a few examples:

∇	∇	∇	∇	∇	∇	∇	∇	∇	∇
×	×	×	—	—	×	×	×	×	×
—	—	—	—	—	—	—	—	—	—
much	more	most	high	low	much high	higher	highest	most high	furthest most far

The multiplication mark with reference to exact figures $2 \times 2 = 4$ gives us an exact meaning. But standing alone, it represents the meaning of "multiple", "much", "many". A sum of £ 1000.- may be EVALUATED as "much money" by one mind, but another mind may differ. The meanings of more and most are indicated by drawing a line (and a heightened position of the symbol). Now, one of the "grammar rules" of semantography, discussed already, tells us that any spatial line drawing can only be relative, and each observer may draw the line differently. The same reasoning applies to the spatial symbols for high and low, near and far. Only when we introduce the measurements of the scientist and the engineer may we obtain agreement.

But as we have seen, the words "high" and "low", "far" and "near", "above" and "below" are used without these references, and usually attached to other EVALUATION words: "furthest limits", "above all", "highest quality" etc. etc.

There is a long chapter in the book with the title:

The Ravages of Language. Germany - a Nation ruined.

It is written to be read by people of Germany, who have been brought into utter ruin by their word-propagandists, who knew how to employ vague language. It is written to be read by other people in order that they may avoid similar pitfalls. Most of German and Nazi slogans are translated into the symbols in this chapter and the study may be of interest. There is the amazing fact, that the German people, in spite of all the happenings, still believe that they are "right", that Hitler was "right", and that they are ^{not} sorry in the least for what they did, including the killing and gassing of about 7 to 10 million of non-combatants, innocent men, women and children. The foreign correspondents who toured Germany after the war, and interrogated thousands of people, reported that about 80% of the questioned people had this opinion (and this in spite of the fact, that a foreign correspondent can produce and did produce a chocolate bar at a moments notice. Very likely a great number of the remaining 20% who said that they "were sorry" may have succumbed to this possibility.)

Now, many explanations have been offered to explain this attitude of the German people. Among the mild ones who appeal to understanding are those which offer a clinical aspect. The Germans are suffering from a kind of mass paranoia.

THE HIGHER SENSE OF HITLER'S EXTERMINATION OF PEOPLE

But anyone who had contact with many German people will testify that - on the average - they are just as intelligent and reasonable as people of other nations. There is a much simpler explanation, and one which may be accepted even by the Germans, once they agree to learn, what the new science of semantics has to offer for future generations.

Take for instance the following striking example. How is it possible that a nation of literate and intelligent and even religious people like the Germans can brush aside the fact that they committed the most horrible mass crimes in the history of mankind? How is it possible that their conscience seems at rest, nay, that they think they have been right? The answer is: they got a new slogan. They will tell you (as reported by correspondents):

"Es war notwendig in einem hoeheren Sinne"
"It was necessary in a higher sense"

You will find this statement fully translated in the special chapter (p.450 ff). But we don't need the exact symbols. We can analyze the words and put the indicators on top of them. Necessary refers to a mind EVALUATION. Higher has already been dealt with. It carries too the EVALUATION indicator. Sense refers directly to the mind. So we can write:

^ v v v
 ┌ ┐ ┌ ┐
 "It was necessary in a higher sense"

In this statement, you will find only one indicator which refers not to a human EVALUATION. The little word "it" carries the ACTION indicator! "It" refers to the real ACTIONS of and with real THINGS; the mass killing, in gas chambers and with machine guns, of men, women and children. The full sentence without the pro-noun "it" should read:

^ □ □ □ v v v
 "The killing of 7,000,000 men, women and children was necessary in a higher sense."

The ingenuity of this comforting sentence may be further realized by examining the word higher. Higher means more than high and high means more than low. But what measurements are to be employed?/here to draw the line? If the Germans would reason that they had only so many tons of food for so many millions of people and therefore: it was necessary...out of sheer mathematical, medical, logical reasoning - it would have been an excuse. But then - it would not have been necessary to erect gas chambers, just let them starve and die a "natural" death. So - a "higher" reasoning must be employed. "It was necessary in a higher sense"

As you see word-wizards are still at work in Germany and with such a little sentence the conscience of an intelligent people were put completely at rest. Anyone can interpret this sentence as he wants to, anyone can draw the higher line as high as he wants to. And there is no use arguing that it was "not necessary". As soon as you say this, you will get the answer: "Was it necessary" to bomb residential quarters and kill innocent men, women and children? "Once you realize that on the sole basis of human EVALUATION words, debates lead nowhere, and your opponent realizes this too - then you may both come to a saner attitude and even to agreement.

There is one little word in the above sentence which has not received an indicator. It is the word "was" (apart from the words "in a" which are particles, s.p. 288). Readers who are not accustomed to logics and semantics may be interested to hear that this little word "was" or its present tense form "is", has been recognized as one of the greatest mischiefmakers in any language.

The verb to be refers primarily to real existence. For a human mind "to be or not to be" means "to live or not to live". Consequently in semantography, this meaning must be represented by a symbol which indicates that mystery, greater than all the miracles of the starry sky, the inexplicable property of matter to create living beings, which in turn create other beings, culminating in the creation of man and his mind, who can ponder about the purpose of this force. As we know nothing whatsoever about its origin, any geometrical symbol will be arbitrary, just as the words LIFE or EXISTENCE are arbitrary sounds "to stand for powerful forces whose nature we don't know" (Jung). However in search for a simple symbol we shall agree about one, which has been understood even by primeval man. We, the upright walking individuals, live because of the sun. Without the sun, there would not be Life on earth.



However, besides animated matter, there is inanimated matter. A man is, exists, lives, but a stone is and exists too. Although its electrons are in constant action, it is devoid of the quality to duplicate itself. A stone "lives", but in a "smaller" meaning. So, let's draw a smaller symbol.

animated matter



man exists
lives
is

inanimated matter



stone exists
is

The symbol for stone

is a diminutive
(minimized symbol)

of the symbol for



mountain

The big symbol stands for existence, life, animated matter in general (from a single protoplasm cell up to man) and the small symbol stands for existence of inanimated matter (from a single electron up to myriads of stars). We may, but we do not need to put the ACTION indicator on top. Existence means continuous ACTION.

However, very often we use the verb to be in a smaller meaning, even for living beings.



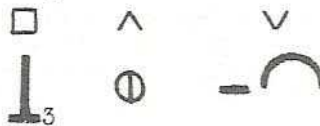
man lives in this house



man is in this house

The sentence "the stone is on the table", will be written with the smaller symbol for to be. In the above cases the verb to be has been used to stand for real existence in space and time. In most languages, there is a second use of the verb to be, namely as an auxiliary verb. Man is working, Bird is flying. We could use the small symbol to write these sentences, but we could dispense with it, saying Man works, Bird flies. In any case, the use of the symbol for to be indicates again real existence, when bound up with a verb for real physical ACTION in space and time.

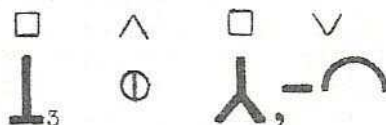
But now comes the mischief, the use of the verb to be in a disastrous way, accounting for much of the misery which man inflicts upon man. In the above cases the verb to be has been used to stand for real existence of chemical THINGS and physical ACTIONS in SPACE and TIME. Now we shall see that man uses it in connection with human EVALUATIONS, meanings which we don't find in the outer world, but only in man's minds and differing in different minds.



He is stupid
(3rd individual) (minus mindful, contemplative)

As you can see, the verb to be is now bound up with an adjective (he is wise, he is stupid this is good, this is bad, she is ugly, etc., etc.) It can be bound up with an ad-verb, the ad-jective to the verb (he acts rightly, he acts wrongly, he acts manly, etc.). These two groups, adjectives and adverbs fall in the class of human EVALUATION. By hitching these words to the verb to be they appear as having a real existence, as corresponding to anything in nature. If a girl IS bad, than she is really and in reality bad, and nothing can be done about it. It "IS" so. And if another mind should disagree, than this other mind IS wrong, really wrong.

This use of the verb to be is also termed the "Is of Prediction". A person makes a prediction by using an adjective or an adverb. Then there is the "Is of Identity", in which a noun is confronted with another noun; man is an animal, he is an idiot. However, the writings of the semanticists about this very important matter is still on the university level, and often difficult to understand for the simple man. Semantography offers a possibility to teach this matter already in the primary school. We can write



He is an idiot
(man, stupid)

This little formula reveals that he is a male human being, there is no doubt about it. However the human EVALUATION attached to him does not correspond to nature. It is a relative meaning, related to somebody, who makes this EVALUATION. From what we know about the working of EVALUATIONS in minds, according to our "grammar rules", other minds may violently disagree about this EVALUATION, and may declare that "he is not stupid, he is not an idiot!"

This little formula shows you too the similarity with chemical formulae. When we analyse the word "idiot" we find that it does not refer to an acid, to a stone, to a plant, to an animal, but to a human being, a distinct chemical and biological entity in our world. Consequently we must put down the symbol for (male) human being. The second symbol however, although referring to a mind and its working, must bear the symbol for human EVALUATION. Thus, a semantography formula of a compound symbol for a word in our language, reveals the structure of this meaning and sometimes the inherent danger, just with a chemical formula. Calling a man an idiot may mean danger of misunderstanding, insult, injury, and retaliation.

Children could draw (and actually draw already) the simple symbols for man, house, sun, mountain etc. in the kindergarten. In the first class of primary school they could learn to write simple sentences, ^{in semantography} even before they acquire the A B C. They speak already fluently. Consequently they could write sun shines on house, rain waters flowers, etc. In the third class they have read so many stories and know so many words, that they can be taught to distinguish between words which mean THINGS (which can be touched or put on a scale) and words which ^{mean} real ACTIONS (which they can observe with their eyes). Then they can be told about human EVALUATIONS. At the age of say 9 years, the following conversation might take place between a boy and a girl:

Boy: "You are nutty, that's what you are."

Girl: "I am not nutty, and you know that."

Boy: "I think you are nutty."

Girl: "Ah, that's what you think in your mind, but other minds, my parents, the teachers, my friends evaluate me differently. Don't you remember what the teacher said about human EVALUATIONS. And don't you remember what the teacher said about the use of I am, you are, he is?"

Boy: "Well, what are you then? You must be something."

Girl: "Oh, I am a lot of things. I am a girl, I am 9 years of age, I am 4 foot 3 inches high, I am born in this town, I am the daughter of Mr. and Mrs. Henry Smith, but I am not nutty. The meaning of nutty in connection with me - just think a bit - you will find it only in your head."

This dialogue is composed under the assumption that the boy has completely failed to grasp what he has learned about semantography throughout the kindergarten and the 3 years of primary school. This is very unlikely. When children are accustomed to draw the outline of real THINGS, they acquire the ability to see the real THINGS behind the words.



They usually draw pictures of girls on walls and boards, but they have to write their EVALUATIONS in ordinary writing. They can't draw them. Now they would grasp the difference between the real THINGS and words. And even if they would draw a caricature of a girl and write underneath:

THIS IS HELEN

the missile would fail to hurt, because the children would have been taught that the IS can be used to connect meanings, not belonging together. The IS can be used to tell lies.

When the children grow up, learn more about semantics and semantography, it may be very likely that many of today's bitter controversies between man and wife would not take place.

"You are fickle."

"I am not. You don't understand me."

"Is that so? I think I understand you perfectly."

"No, you don't. You are cruel, selfish, inconsiderate."

and so on, with tears, banging of the door, bitterness, headaches, etc. etc.

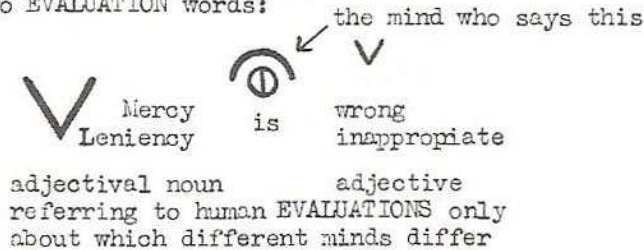
Look into the controversies raging in the letters to the editor. People usually argue about some words, which the other party has used, and you may find, that in most cases, these are human EVALUATION words, brought to some sort of real existence by the verb to be.

Apart from the teaching of our "grammar rule" to children, we can devise a symbol, which should act like a warning sign. Each time, we use the verb to be we might remember the outline of the symbol, which would make us aware to be careful in the use of this verb.

^ ⊖	^ ⊖	^ ⊖?	^ -⊖	^ ⊖
to live, be, exist	to be, exist	may be might be	is not (minus)	be, is, exist in a human's mind

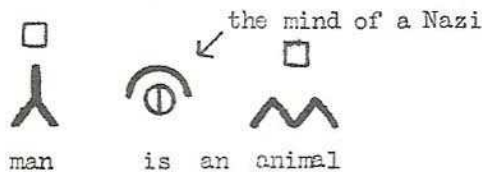
Persons who are aware of the fallacies, committed with the verb to be, are careful to put the question mark into the meaning. They say: "it may be...it might be..." This little safety device is often sufficient to calm the opponent down. Nothing enrages people so much as when other people say: "it is so". The answer should be: "In your mind, but not in nature."

Up till now we have discussed the use of the verb to be as a mischiefmaker when connecting a real THING or a real ACTION with a human EVALUATION word. The mischief becomes greater if we connect two EVALUATION words:



The mind symbol over the symbol to be should be considered as a semantical safety device. You will find many other such safety devices in the book, ^{future} and citizen, who know them from their school days, may benefit greatly in many of their activities.

Then there is another mischief created by the verb to be. It can be used to tell sometimes monstrous lies with disastrous consequences. No human EVALUATION words are used, only strictly defined chemical THINGS or physical ACTIONS. Take this for instance :



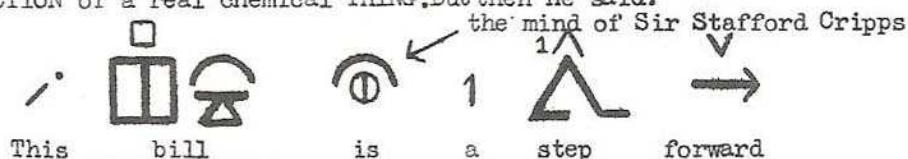
If you say: "Man may be compared to an animal with strict reference to this or that activity" you have put enough safety devices into your sentence. You have used "may" and you have referred to the meaning of "comparison", which is a mind activity, different in different minds. Moreover, you state your system of reference.

But when the Nazis said: "Man IS an animal" and repeated it over and over again, from Adolf Hitler over Goebbels down to a Hitler youth, then it becomes a fact in those minds. It IS so. From then on, other conclusions are easy to draw: Survival of the fittest, Brute force, Parasites must be exterminated, etc. etc. until a whole continent is devastated.

Of course, it is a lie. Man is not an animal. No animal has yet written a book or constructed a telescope. There is a difference, just as there is a difference between a Hydrogen atom and a Helium atom. It might be a difference in degree, just a couple of protons, neutrons and electrons, but this difference makes just "the difference". A balloon filled with Hydrogen is highly inflammable, whereas a Helium balloon is not.

Usually, such use of the verb to be brings not so much disaster, as the one above. In most cases it is harmless. But when children are taught to write down the outline of things in a geometrical writing, they become aware of the "nonsense", and this makes them wary, when hearing other such comparisons, which do not refer to facts found in nature.

When Sir Stafford Cripps made a step forward from his chair, to introduce the bill for the nationalisation of the steel industry, he really and definitely made a step forward, a real physical ACTION of a real chemical THING. But then he said:



Bill is symbolized by book or booklet for the judge (judgement), symbol of mind and the age-old court symbol: scales

One step is symbolized by the single ACTION of legs and feet, depicted by the age-old Egyptian hieroglyphic

(AI) Now, a bill is not a step. It's obvious. But we are so accustomed to such language that we don't realize the nonsense. Again, it's harmless for "small talk"; but it is a different matter if issues of the nation are at stake. Listen to the interpretation of Sir Stafford Cripps' "step":

Mr. George Strauss, Minister of Supply explains the bill for the nationalisation of the British steel industry.

When the directors are weak, or the management below standard, the corporation to be set up, will cut out the dead wood..."

All this may seem plain enough to millions of British taxpayers, who like to potter in their garden and have often cut out the dead wood. But they really performed the physical ACTION of cutting the chemical THING wood. "Now they are going to do the same in the steel industry. Sure enough, if something is dead, it ought to be cut out."

Then there is the EVALUATION word "weak" in the above statement. Who is going to decide, which director is weak, or less weak, or a little strong, or very strong. What units of measurement? What yardsticks?

Prof. Irving J. Lee of Northwestern University has written a commendable book "Language Habits in Human Affairs" (84). He compares the language of ordinary people, including the politician, with the language of the engineer.

"When the engineers planned, they ended with structures which are reliable. When they make predictions in their specialities, things have a way of turning out as per specification. But how about the men who govern our economic, political and legal affairs? The security we have with the engineers we do not have with the social "scientists" - if we measure their achievements"

Lee finds the difference in their talking, which reveal a difference in their thinking. An engineer will talk in figures and think in figures of measurement. But he will refrain from "figures of speech". They have a vague meaning. They mean anything and nothing.

John Jewkes, Professor for Political Economy, University of Manchester in his book "Ordeal by Planning" (MacMillan, London) in which he criticises the Labour Government.

"Since 1945 the Supreme Planners have been increasingly engaged in searching for alibis, in hunting for scapegoats and in trailing red herrings."

Mr. Strauss, intends "to cut out the dead wood" and Mr. Jewkes accuses him and the Government of "trailing a red herring". This is not the language of the engineer.

We should not be surprised that politicians prefer figures of speech and other rhetorical tricks, which refer directly to work in the garden and the field. The "man in the street and on the land" understands this language. What, for instance, is a spade? The simple man does not need lengthy explanations. A spade is a spade, isn't it?

Claude Morgan, Manager of the French communist weekly "Les Lettres Francaises" in the libel suit, brought in against him by Victor Kravchenko, author of "I choose Freedom"

"We have a right to call a spade a spade. Kravchenko is a traitor."

Here we have the IS of self-identity. A spade IS a spade. Kravchenko IS Kravchenko. But the trick is done by using another kind of IS, when saying Kravchenko IS a traitor.

Emil Mazey, an American labour leader, when challenged to prove that a certain man in his union was a communist, said:

"I can't prove that you are a communist. But when I see a bird that quacks like a duck, walks like a duck, has feathers and webbed feet and associates with ducks, I am certainly going to assume that he is a duck." (109)

As you see, Mr. Mazey confesses, that he cannot prove that that man is a communist. So he proves it with the trick a duck is a duck. Simple enough for the "simple" man.

Mr. L. B. Pearson, Canadian Minister for External Affairs in a broadcast:

"No one should be deceived by those phony olive branches which now seem to be waving here and there in Europe on orders from Moscow."

"Olive branches waving" and even "phony olive branches". This is the kind of talk, which confuses people.

Mr. Vishinsky in the Security Council, speaking about disarmament:

"If you adopt the proposal to reduce armaments by one third during one year - then we will put our cards on the table."

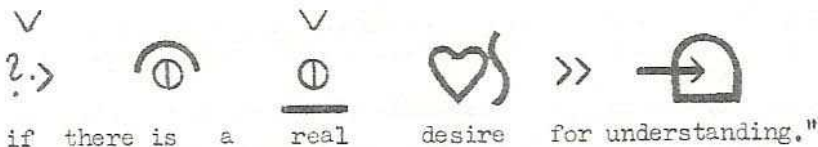
Any person, who has ever played

cards, ^{players} knows what it means. Laying down the cards, which you hold in your hands, means showing the other ^{the} truth, the whole truth and nothing but the truth. But when you write this phrase down in semantography, you realize that it refers to playing cards, but not to guns. Mr. Vishinsky knows he cannot put the guns on the table, but neither is he willing to let an international commission go to Russia and look there at ^{with} the truth - so he uses a phrase which may have a meaning in THINGS and ACTIONS when playing ^{with} cards, but not when playing with guns.

However, the newspaper reader is not aware of the trick and he may be impressed by the other words of

Mr. Vishinsky: "Russia yearns for co-operation. It is possible - I repeat it is possible -

to have co-operation between countries of different ideologies, of different social structure

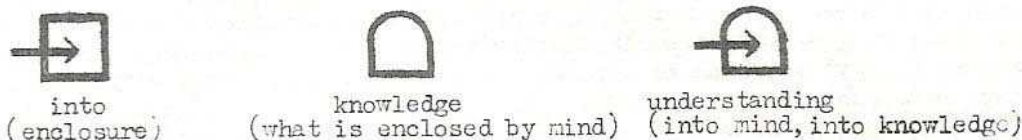


Explanation:

The symbol for real refers to existence (to be) on this earth.

" " " desire " to a feeling, emanating in the Id, together with the symbol for flame.

" " " understanding is composed as follows:



These words of Mr. Vishinsky are wonderful. Everyone of us could agree with them. In fact Stalin, Molotov, Bevin, Truman, Roosevelt, Hitler, Mussolini and anyone of us, have made similar statements at one time or another. But in semantography, any pupil who writes down the relevant passage: "if there is a real desire for understanding", must realize at once, that the words refer only to human EVALUATION words, and may mean different things to different people. Moreover the phrase begins with if, which carries the question mark. A communist might interpret it, that the Western powers have no real desire but Russia has. And a Western democrat might think the opposite is true. The newspaper reader (neither communist, nor anti-communist) will be impressed by Mr. Vishinsky's words, especially by the stress on "real desire". A pound of sugar is real. The warmth of the sun is real. But real desire? Real are the brain cells. But so far, we have not been able to measure desire, real or not real. Up till then we must treat it as a vague human EVALUATION. Moreover, you can hitch the word real to anything. A real ghost. A real nonsense.

Now, we may agree that Sir Stafford Cripps did not actually mean that a bill is a step and Hitler did not actually mean that man is an animal. They meant it only in "some sort of way" (and this word "way" does not actually mean a footpath). When we use such words we transform their meaning somehow - within our minds. We take some characteristics of an animal, or a step or a way, and transfer some of these characteristics to some other things. This transfer takes only place within a human mind, and it does not correspond to anything in nature. The Greek philosophers, who studied language thoroughly, have termed this metaphora, because metaphorein means transferring in Greek.

The citizens of today have not been taught this in primary school and even in high school. They don't know the meaning of metaphor and they don't know that it can be used to falsify any meaning. Consequently they fall an easy prey to people who know how to handle it. Very often, however, people use metaphors in political debates, without being aware, that they are deceivers, who deceive themselves too.






Once you have been trained to recognize a metaphor, you may be appalled finding that political speeches and articles contain metaphors in almost every second sentence. Once you have been trained to form a sentence, not according to conventional grammar, but to the "grammar" of a physicist, who observes THINGS performing ACTIONS, you would not stand any more non-sensical statements that

Money rules in America Tyranny rules in Russia Superstition rules everywhere

We have ^{heard} such statements so often that we don't realize the physical nonsense contained in them. But when children are taught to write them down in a geometrical writing, showing

the outline of real THINGS, and are told a new "grammar" based on chemistry, physics, biology and psychology, they might realize that such metaphors might mean "anything and nothing".

The amount of metaphors used in ordinary speech is so great, that we must invent a special symbol for it, if we translate a saying in semantography. Again such a symbol should act as a warning sign and our symbol for metaphor looks exactly like a warning sign used on the railroads and highways.

				
individual	a saying, speech (mouth)	metaphor a "highbrow" saying a "figure of speech"	wings	poetical metaphor a "flowery" speech

For poetry, for "small talk", metaphors and poetical metaphors may be used freely. But in a political speech or article they are often used for a definite purpose. As Plutarch remarked 2000 years ago:

"In their declamations and speeches they made use of words to veil and muffle their design" And the politician-diplomat Talleyrand remarked frankly 140 years ago:

"Language is intended for the concealment of Thought."

These quotations contain metaphors^{too} (veil, concealment, muffle). A veil and a muffle are THINGS with which we can perform the physical ACTION of veiling, muffling wrapping, concealing other THINGS. But when we connect these words with brain activities, thought, design, the meaning becomes vague, ambiguous, relative. When a communist speaker accuses his opponent of "throwing a smokescreen; befogging" the audience, these very words of his are in themselves "foggy" and tend to discredit any practical proposal which the other speaker may have made. Just imagine what would happen in a political meeting of citizens who as boys have been trained in school in semantics. They may shout "metaphor" each time the speaker would use one, or the chairman would make one knock with his hammer for each metaphor. In the end, the speakers would have to restrain themselves to utterances like:

"The taxes collected amount to.....25 schools have been built with 13.000 seats..." etc. etc. They might start to speak the language of the engineer. rulers of the

During the last year we have witnessed a strange spectacle. The United States are giving away billions of their tax-payers money for European countries, millions of tons of food, machinery and other equipment - just for the asking. They maintain that they want to aid the European countries to recover from the destruction of the war. The whole thing seems almost too good to be true. But the ships arrive, the food is unloaded, the tractors start ploughing. Whatever the design of the American rulers may be, the chemical THINGS are here, undeniable. What can the opponents do? They cannot deny the THINGS, and the ACTIONS. So a metaphor is put to work.

Czechoslovakia wanted eagerly the "Marshall dollars". Then the government turned communist and refused. How to explain this to communists the world over?



"No Dollar chains for Czechoslovakia"

So the dollars are "forged" into chains, and chains are -- as we know -- used to chain THINGS, people, for instance. This slogan was widely displayed in big posters by a communist.

However, if you have learned to translate this statement in semantography, you know that you have to put up the warning symbol for metaphor:

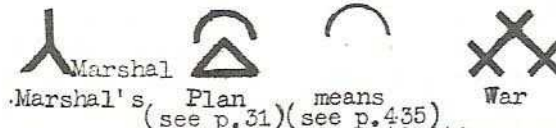


Dollar (stop! METAPHOR AHEAD) chains.

A "grammar" lesson in semantography may thus become a hilarious event in school. Children would become aware of metaphors and thus become wary of them.

However, there are already intelligent people, who are aware of metaphors. And for them

the meaning of the Marshal plan must be explained. In other words: semantics in action. During a demonstration in the Eastern part of Berlin large banners were carried with the inscription: Marshal Plan means War.



Statements like these, referring to brain activities, are - as we have learned - relative and vague in meaning. A plan is a brain conception in a man's head, and its meaning is again a brain conception in a man's head, - but not two brains are alike and think alike. A plan indeed may mean anything. The Marshal plan may mean war, and may mean peace. It may mean a blessing or a waste of money and effort. But if such statements as the one above are repeated again and again and impressed in other brains, then for them the Marshal/ will mean war. Consequently any activity against the Marshal plan, strikes, disruption of transport, etc. etc. will mean: Fighting for Peace. It's simple enough.

The reader must excuse that not every word in this and foregoing examples is translated in semantography. This is an introductory chapter only. The reader, if he would go through the whole book, would have no difficulty to write down anything, including the statement: trailing a red herring.

The reader may furthermore gain the impression that I harp especially on communist utterances. But in the book, he will find that I have taken to task expressions of rulers of any country, not only Hitler, Mussolini, Tojo's utterances, but also those of the rulers of the Western countries, as well as talks between children and man and wife. I confess that I am greatly perturbed about the "war of words" now raging, which may very likely lead to a new world war, which in turn would lead to greater destruction. Already this "war of words" is raging not only between diplomatic quarters, but between father and son, friend and friend, no one being aware, that the words they use, are vague and mean different things in different heads. Semantography should be that tool, with which we can recognize meanings. It should enable us to get to the real THINGS and real ACTIONS. Instead of hitting each other with words, we may start to examine the good THINGS of life, which each country gives to its citizens.

No doubt, such analysis as those above will antagonize many people. At present many people believe that only they are right and the others are really and truly wrong. This attitude prevents people seeing the other people's side. We find this attitude on both sides. It prevents agreement. It prevents an approachment.

Ivor Brown said in his book "The Meaning of Democracy" (79):

"If the mass of the people remain receptive to any trash and utterly incapable of getting behind words to the things they should represent, "people's power" can never be realised. Power will remain in the hands of those who control the formation of public opinion."

The great statesman Disraeli was quite frank about it. He said: "With words we govern men." We have seen what Hitler did with words; we see now what the communists do with words. But to prevent further destruction we must realise that the words which we handle are just as vague and ambiguous, and that we must teach the citizen to replace such vague words with others which mean definite THINGS and ACTIONS. In my humble opinion (which is of no importance whatsoever) the "Aid to Europe", the millions of tons of grain, machinery, etc. is the first large-scale attempt to replace words by THINGS. The Boulder dam, the Grand Coulee Dam, the Tennessee Valley Authority, and any other great THING built anywhere in the world including Russia, to bring the greatest amount of good to the greatest amount of people, these are the THINGS which count, and which should be weighted, but not the words. Let us realize that even the words, most sacred to any American, the words of the Declaration of Independence, are vague and take on a definite meaning only, if we implement them by real ACTIONS with real THINGS.



Here we have 4 human EVALUATION words out of five. The only real THINGS are "men", depicted by a male and female of the species. The only ACTION indicated, is found in the word "created", meaning that men came into this world by a miraculous ACT of creation. They have been created. This past participle changes into an adjective, when connected with the IS. They are created. In any case, the symbol for Creation, Nature, Creator indicates

= according to our "grammar rules"-our ignorance in this matter. What we know only, is that men come into this world by some act of creation.

The vague words, which should make us wary, are "all" and "equal". They do not denote a real THING or a real ACTION. "All" takes on a definite meaning if referred to a restricted fact, as "All nuts in this sack amount to 374 nuts." But if we say "all nuts in this sack are equal" we have used another vague word. "Equal" takes on a definite meaning if referred to a restricted fact. 2 + 2 equals 4. If we say: "men are created equal in so far as they have 1 head, 2 eyes, 2 ears, 10 fingers, 10 toes etc." we have given "equal" a restricted meaning. But again if we say "all men are created equal in so far..." we have brought the vague "all" into the statement. In fact, freaks are born every day, with 9 fingers, 11 toes etc. In short: not all men are born equal.

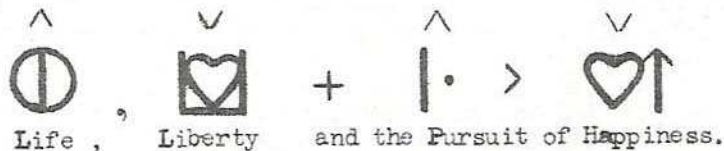
This restriction of the words "all" and "equal" may seem ridiculous, but it tends to show that such statements are vague in meaning. In fact, if we take a closer look and compare the statement with what we find in nature, we must find it an outright lie. Not two humans are born alike, are created alike, and even in the case of one-egg twins, with finger prints alike, environment will make them two different beings.

Yet, millions of people inside and outside the United States cite at one time or another this solemn statement "All men are created equal", but each one gives it a different or slightly different interpretation in his mind. When we go back to the times of Jefferson, the years preceding the French Revolution, when this declaration was written, we should not be surprised that this statement had a quite different meaning at that time, expressed in definite THINGS and ACTIONS, slave labour, high taxes, paid by the common people and not paid by the nobility, etc. etc. Today, this vague statement is again interpreted differently. The Negro will give it a different interpretation and the 100% white American, who tried in vain to be admitted into an exclusive country club, will give it another interpretation. The enemy of American democracy will use his own interpretation to point to American "inequalities", whereas in Russia, of course, there is perfect "equality" and so on.

We have not been told in school, that any adjective and any adjectival noun such as "Equality" may be vague in meaning, and we must demand in each case a strict reference to THINGS and ACTIONS. "Equal? with reference to what?... Equal in so far as..."

We may assume that Jefferson was aware that he has to make a reference. He did not say that "all men are created in so far as..." but he added in the same sentence that "they are endowed by their Creator with certain unalienable Rights". Unfortunately here we find again vague human EVALUATION words. You will find the symbol for Rights on page 498, but without looking there, you may already agree that few words have found more different interpretations than the word Right. In fact, millions of people in the legal profession, private and official, in any country and in the thousands of years past, have found employment, because the word Right is interpreted differently in different minds.

Again Jefferson must have been aware of this and so he makes reference to 3 of these Rights, but unfortunately he uses for two of them again vague human EVALUATION words. In semantography



Now you may ridicule the "childishness" (another adjectival^{noun}) of these symbols, especially the heart symbol (which you may replace by the other Id symbol for the mind, p. 30). However, if you have studied the "grammar rules" of semantography, you may agree that these symbols say at least more than the words^{which} people use for these meanings in 3000 different languages.

The symbol for Life indicates the outline of the sun without which no individual can live. Life is an ACTION.

The symbol for Pursuit indicates the ACTION of being after. After is denoted by a point after a line. It is a meaning in SPACE and consequently relative. You must state the reference. If you are after a street car, you pursue a real THING. But if you pursue a meaning, which is EVALUATED differently in different minds, than the statement is vague in meaning, as we shall soon see.

The symbol of the heart stands according to our "grammar rules" for the Id, the It which lives us, the "unknown and uncontrollable forces (Freud), whose nature we don't know" (Jung). In the respective chapters of the book (p. 164ff) you will learn what modern psychology has to tell us; that reason and conscience are only part of those activities which go on in our

mind. Immanuel Kant said, that the two greatest miracles are the starry sky above us and the ethical law within us. If the electrons which circle within our brain cells can somehow produce the conception of the meaning of Right within our brain, then this meaning is part of Creation, and - very likely - is created also on other celestial bodies. But, right now, we grapple with its vagueness, just as we grappled with the meanings of mathematics and chemistry thousands of years back, until we were able to write down definite meanings in the respective symbols. A law maker makes a word/law, if he refrains from vague words, and state the meaning of Right, with reference to definite ACTIONS and THINGS.

The symbol for Happiness indicating "heartlifting joy" contains two symbol elements, of relative meaning, the heart symbol and the arrow symbol. Well, we all ^{are} to know what Happiness means. In the time of Jefferson it meant among other THINGS, getting rid of the British soldiery which looted, molested and outraged American people, it meant also not paying taxes to the English king in far away London, it meant definite THINGS and definite ACTIONS. Today with different people it has different meanings, but again expressed in THINGS and ACTIONS. People in any country pursue happiness by evading taxes. There are the innumerable sadists of any calibre, who have a mind defect, (which we may be able to treat one day, as we treat a wound today) These sadists pursue their happiness in the home, in school and anywhere else. There are people in America and elsewhere, who, in pursuit of happiness, tar and feather, shoot and lynch other people; there are the managers who pursue helpless girls under their employment; there are the hunters, who pour showers of lead into flocks of geese - they are all in "pursuit of happiness". What a meaning!

The symbol for Liberty contains again two relative symbols, the mind symbol and the space symbol for open. They indicate a thought, feeling in our heads.

Feeling of

Feeling of



free
freedom
liberty

oppressive(-ed)
oppressiveness
tyranny

These words are adjectives and adjectival nouns. Moreover they show the popular symbol for the mind, the heart. No doubt, some women, whose husbands refuse them the furcoat or the trip to a sea resort, will feel - in their heart - very much oppressed and under the tyranny of their husbands. A communist may think that the people of Usbekistan are free, whereas the people of the United States are oppressed, that a Chinese in communist-controlled China is free, whereas in the other parts he is not. You do not need to know Asia to understand that the word free and freedom are almost meaningless, without reference to definite THINGS and ACTIONS.

But, you may say, Jefferson meant "personal freedom". But this again is a vague meaning, "personal" being an abstraction from the meaning of "person". So, you may get angry and say "Liberty" means "not to be kept in an enclosure"; the opposite of "Captivity".



captive
captivity

to captivate
to make captive

a captive
a prisoner

This symbol looks - not incidentally (because this is a geometrical writing) - like the corresponding Chinese character. But in this modern character writing we have to contemplate it according to our "grammar rules" referring to modern physics and chemistry. A chemo-physicist, looking at this compound will find the symbol for the human, a distinct chemical and biological entity in our world. However, the symbol for enclosure refers to space, and any space meaning is relative. We must in each case establish our reference. We have contemplated this symbol already on page II. Indeed we may say that

"Man is a prisoner on this planet"

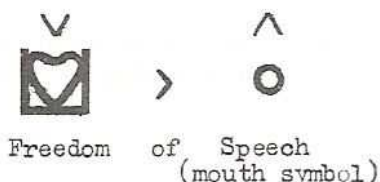
The enclosure thus comprises the surface of the earth up to the stratosphere. But you may say too

"Man is a prisoner in Soviet Russia"

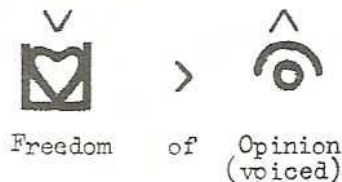
Then you have confined your enclosure lines to the frontier lines of the Soviet Union. But the symbol for prisoner contains still the relative space meaning. You may consider the man in Soviet Russia a prisoner, a captive, held in captivity, not free at all, but there might be millions of people in Soviet Russia who wouldn't consider themselves as not free; on the contrary. If you say that a man in Soviet Russia cannot board an outgoing ship, because he can't get past the gates without that precious paper, a passport, a communist might retort, that millions of American people can't board an outgoing ship, because they can't ^{get} past the gates without that precious paper, a ticket. If you blame communism in Russia, he blames capitalism in America. You might never have left your home town and still consider yourself free; other people roamed the earth in search of that feeling of freedom without finding it.

Once we realize that the meaning of freedom is a relative one, we will not be so sure of ourselves in condemning the other guy's conception of freedom. And if the other guy has learned this lesson too, then you might come together to draw up in agreement the lines of the meaning of "freedom" in each particular case. Then you may agree, that man shall not be free to kill another man; that man shall not be free to beat up his children; that man shall not be free to drive his car on the wrong side of the road, and so on. Then you ^{may} agree that captivity, the opposite of freedom shall mean, if a man is confined to a space of a block of houses or a camp, say a few hundred yards square, and is not allowed to leave it during a prescribed time - if he has committed some "offence". But "offence" itself is a vague word, and again in such cases agreement might be reached and the judge provided with instructions which contain no vague words. We shall soon see how this works.

Take our famous slogan of "Freedom of Speech". In semantography it runs



or to bring the mind symbol into the picture



The vagueness of this slogan has made it easy for the enemy of democracy to attack it. Are you free to express your opinion about your wife (or husband) in her (or his) presence, or about your boss in his presence? You might do it, but it might have disastrous consequences, just as in Soviet Russia. If you say there is no Freedom of Speech in Soviet Russia, because Opinion is controlled there, a communist (it was Mr. Molotov in the Security Council) will retort, that in America, the big bosses of the newspapers control Opinion. Agreed - but with a slight difference: they can't send you to a confined space and confine you there. But it can be done, even in America. If you say something against another man, he may sue for libel and slander. You may get fined and if you cannot pay, you may go to prison.

So, let's drop this vague, and ambiguous slogan and let us realize that we must refer in each particular case to definite THINGS and ACTIONS. This has been done to a large extent in the "civilised" countries. You may accuse somebody, including the president, that he is a thief. If you can prove it, by pointing to definite THINGS and ACTIONS you may get free. If you can't prove it, the judge is restrained by law to fine you between say 50 to 5000 Dollars, or if you can't pay 1 to 6 months imprisonment, but not more. But he can't send you to a concentration camp for life, or send you to the firing squad. This is a difference, expressed in definite THINGS and ACTIONS.

Once we realize that there is not complete Freedom of Speech in the "Western democracies" we shall not use this slogan, because we will get it back in our face. Instead, we shall refer to particular cases. In America or in Great Britain, there is Freedom of Speech in so far as you may attack without fear the policy of the government, or the doings of the ministers. You may get onto a soap box and cry "Bevin must go" and you can do this in the presence of a large crowd, and even police. If you can do the same in Soviet Russia, well, then there is Freedom of Speech in Soviet Russia in this particular case. There is the joke on record:

American: "We have Freedom of Speech. For instance I can go to Mr. Truman, shake my fist in his face and say: "To hell with Truman!"

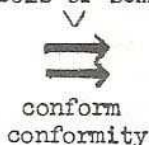
Russian: "If this is the meaning of Freedom of Speech, I can do exactly the same thing. I can go to Mr. Stalin, shake my fist in his face and say: "To hell with Truman!"

A communist will tell you, there is Freedom of Speech in Soviet Russia and he will point to the Soviet Constitution. Freedom of speech is assured, provided it is "in conformity with the interests of the toilers and in order to strengthen the socialist system."

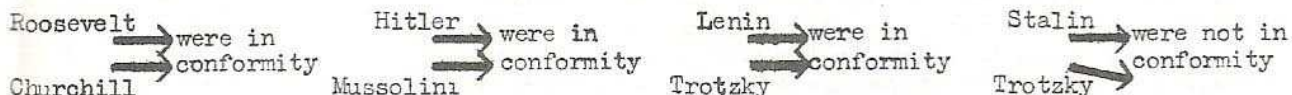
This provision is so simple, so clear, so self-evident (and a couple of more adjectives) for a communist. You will agree if you translate at least the first part of the sentence as follows:

"Freedom of Speech in America, provided it is in the interest of the American people"

Why it is "clear as the sun" (whatever that metaphor means). In fact, the committee for the investigation of un-American (another adjective) activities, works on this basis. But when you translate this into the symbols of semantography you realize the vagueness.



We have learned that the arrow indicates a relative meaning and needs further reference. The word conform does not indicate a specific THING or a specific physical ACTION. It is a human EVALUATION of at least 2 ACTIONS or 2 EVALUATIONS.



Needless to say, that all of them were convinced to lead the people "forward". That the meaning of "conform" refers to a human EVALUATION can be proved by the many post-war books. Some writers believe, that Roosevelt and Churchill were not in conformity. Some others say, they were. Why not refer to definite THINGS and ACTIONS? Two girls can be "in conformity with their dancing steps" (definite ACTIONS and THINGS) Two generals can be "in conformity with time and coastal point/landing" (definite ACTIONS and THINGS). But when you hitch this EVALUATION word to another EVALUATION word "interest"; then vagueness must increase.

What does it mean to be "in conformity with the interest". Does the word ^{interest} indicate a specific THING or a specific ACTION? No. It's a meaning in our heads. In semantography



interest

In it's widest meaning, the symbol refers to the meaning of PLUS, ADDITION in a man's head. We use the same symbol for banking purposes, but here it is bound up with a definite THING money. In it's widest sense it may mean anything, but different people have different "interests", haven't they? You see, the word "interest" is too sweeping a term to mean any THING in particular. Some people want a PLUS of churches, others a PLUS of schools, of box fights, wages, music, leisure, government control, etc. etc.

Now let us write down the first part of that sentence in the Soviet Constitution:



in conformity with the interest of the toilers

"Toilers" is symbolized by man and the ACTION symbol doubled. It means a man who acts, with the meaning of ACTION stressed by doubling the symbol. You see, the only word which refers to specific THINGS is the word "toilers". The others are EVALUATION words and can be EVALUATED differently.

Suppose you are a communist, and you believe sincerely and honestly that communism will save the world. You follow closely world events and you come to the sincere conclusion that

"the removal of Zhdanov from office would be in conformity with the interest of the toilers."

If you say this inside Russia, you might be brought to trial. There is Freedom of Speech provided... and the judge may find that what you said was "not in conformity with the interest of the toilers." Just a difference of EVALUATION.

The other part of the sentence is even more vague:

"...and in order to strengthen the socialist system."

You will find its full translation on page 503^{ff} in the book. Here we shall translate only the meaning of "to strengthen". It is derived from "strong" and this EVALUATION is primarily made from the physical strength of a man. A man who wants to show his strength will usually bend his arm and display his biceps. The arm symbol is the same found in Egyptian hieroglyphics.



Now, if you say: "I want a strong man for this heavy box, . . . you refer to his biceps. However, if you say "I want a strong man for the government", you use the word "strong" as a metaphor. Consequently different people will EVALUATE this metaphor differently. It may mean anything for the best or the worst, including the chopping of heads.

You can "strengthen" a man by feeding him well. You may even "strengthen" a bridge by adding pillars and crossbeams. All this can be measured by the physicist. But when you say that spoken words can "strengthen" or "weaken" socialism, then you use a metaphor, and in semantography, you must put up the warning sign of metaphor (p. XIII). In fact, you may criticise something in Russia in the sincere belief that what you say will "strengthen" the socialist system. But if you are the accused, you will have no scales, no apparatus to prove that your saying did "strengthen" the socialist system. The judge may declare that your saying "weakened" the socialist system. And being the judge, his EVALUATION will pre-

But "socialism" means something which is EVALUATED differently. What socialism? There are quite a number of socialist systems, and being plans in man's heads, they are EVALUATED differently in different heads. There are the social-democrats, there are the social revolutionaries, the mensheviki and the bolsheviki, the anarchists, and a host of other parties all professing socialism. Lenin was a socialist, but Trotzky was a socialist too, and many others who paid with their lives because they EVALUATED the meaning of socialism just a little differently. If the communists claim that Jesus was a socialist and communist, if the Nazis claimed that their doctrine is a national socialism, then the meaning of socialism is so wide and vague as to mean almost anything.

In the chapter on "Socialism" (page 511 ff) you will find an attempt to build up the structural formula for the meaning of socialism. Applying the analytical method of the chemist, we must find the central group in any formula, advanced by the various socialist parties and systems. Around this central meaning are the outer groups, which differ with different socialisms. The study of these differences enables us to see, that it is meaningless to use the word socialism as a sweeping term. But this is the way it is used today by people in furious debates.

People want to debate, want to argue, but unfortunately we have not been told in school about the fallacies of rhetoric, and about logic in general. Yet, this should be a major item in school education. We people need logical thinking more than anything else, don't we? However, the theories of logic are mentally out of reach of the common man. There is the disturbing fact in logic, that a logical conclusion may be logically true, but factually false, or factually true, but logically false.

What we need is a "logic for the common people", a simple one, which they can operate. From time to time, logicians have tried to write popular books on logic, unfortunately with little effect, the matter being too "high" to be expressed in simple language. Here, semantography may fill a gap, providing simple rules for a "Logic for the People" (see chapter p 443 ff)

Take the syllogism. Have we ever been told in primary school or high school about it? Have we ever been told that all of us, use the syllogism hundreds of times each day. And have we been told about the fallacies which can be performed with the syllogism, how people can be forced into logical conclusions, which seem to them perfectly logical, but are factually false?

And then there are other logical conclusions performed with the syllogism. The premises are not actually false, and the logical conclusion may not be false too. Yet, it may mean terrible disaster, if the people are brought to such conclusions in "good faith". Semantography may prove a simple tool to recognize such logic and avoid its destructive consequences.

You, dear reader, may know much more than the little I know about the syllogism. But if you don't know what a syllogism is, I may tell you. It's a kind of mathematical calculation in language and thought. Remember your school mathematics and look at this example of a syllogism:

First premise:..... a = 3

Second premise:..... b = 3

Logical conclusion:..... a = b

And now take this practical syllogism:

First premise: Mr. A lives at 47 Sunshine Avenue

Second premise: Mr. B lives at 49 Sunshine Avenue

1st Logical conclusion: Mr. A and Mr. B are neighbours

2nd Logical conclusion: Mr. A and Mr. B may know each other; belong to the same electorate, etc. etc.

Or take this practical syllogism:

First premise: A person in a house will lock the door from the inside.

Second premise: The door is locked from the inside, key still in lock.

Logical conclusion: Somebody must be inside the house.

Once you grasp the working of the syllogism, then you will find, that you and I, and any housewife and any boy and girl of school age, make such mathematical calculations from morning to night, every day of our life.

But as long as such syllogisms are performed with real THINGS and ACTIONS without any EVALUATION attached to ~~the~~ the logical conclusion may turn out real, and such kind of mental mathematics may be similar to that which scientists perform. However, if there is a word in the syllogism which in semantography carries the EVALUATION indicator or the mind or ^{an} other sense symbol, then we must be careful.

First premise: My uncle said, that Greeks are bad people.

Second premise: Mr. X whom I met yesterday, is a Greek.

Logical conclusion: Mr. X is bad (or must be bad)

And so we happily perform logical conclusions with reference to Roman-Catholics, Jews, socialists, pacifists, and anybody else.

When we would be told a simple logic in school, when we would be told that the IS can be used to falsify reality (He IS a Greek, and he IS bad, but what does it actually mean that he IS a Greek?) then only may we hope for better citizen to build a better world.

When we write down the above syllogism in semantography, we must write down the EVALUATION symbol and we must put the mind symbol over the "is" and "are". Then we would realize that the statement and the conclusion comprise a vague EVALUATION.

The logical conclusion in the other syllogism: "Mr. A and Mr. B may know each other." written down in the symbols (see p. X, XII) reveals that "may know" indicates a vague meaning. But by using the word "may" (which in semantography carries the question mark) we have put a check on our conclusion.

One last example how an intelligent and logical thinking people, the Germans, have been brought to accept the vilest outrage as logical, reasonable, self-evident, etc. etc. This syllogism plays a great part in the politics of today, and so we may profit by studying what semantography can offer in revealing this mental mathematics.

When Hitler claimed the Saar, then Austria, then Sudetenland, he based his claims on: these people are Germans, and their soil must be German too. The world, having accepted the premise of nation, as having a definite meaning (which it has not, see p. 342) bowed to the force of this logic. But when he invaded the trunk which was left of Czechoslovakia, he could offer no claim, no right, no reason - but he offered a syllogism

Adolf Hitlers First Premise: Czechoslovakia is a Danger to Germany

Adolf Hitlers Second Premise: A Danger to Germany must be eliminated.

Adolf Hitlers Logical Conclusion: Czechoslovakia must be eliminated

(XXI)

This syllogism comprises actually the gist of the long speech, which Hitler gave before the Reichstag, in which he tried to justify his rape of Czechoslovakia. When he ordered his troops to invade this country, he drew only the logical conclusion. The premises, he had propounded to the German people months before, and they were repeated in all the German newspapers and over the German radios million of times, until the Germans accepted the premises and then agreed to the logical conclusion.

Let us write down this syllogism in semantography. What is the meaning of Danger? It means something which we fear. And Fear can be resolved in the basic meaning of a downheartedness about some future event. Fear is a feeling, originating in our "heart", that is to say in that part of the mind which psychologists term the Id. In a short symbol:



Now take the relation between two human beings; one fears the other. In semantography:



Both sentences express the same meaning. The first is written in the active form, the second in the passive form. Look at the reversed direction of the ACTION symbol and keep this in mind for later on.

Instead of.....you are feared by me
we can write.....you are a danger to me

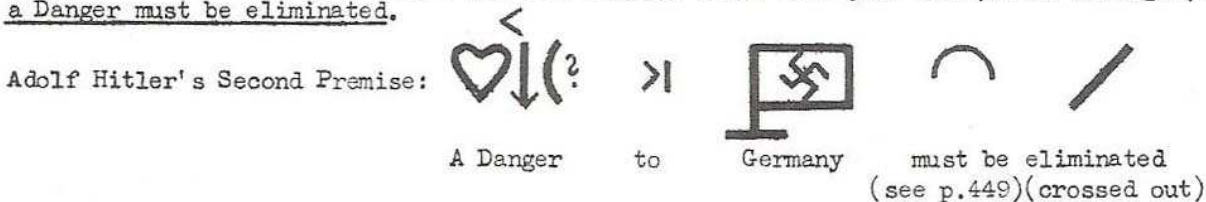
Thus we realize that the symbolization of the meaning of Danger is performed by putting the passive indicator on top of the symbol for Fear

Anything which is feared by a mind, comprises a Danger to this mind.

Now we can write down



Now, this statement is not a lie. Czechoslovakia was a Danger to Germany. The question is only to what extent, and under what circumstances? In other words, the EVALUATION of that EVALUATION word Danger. When you come to think of, any THING is a Danger to Germany: the polar cold, the sun, the rain, the dust, the wind, the flies, the microbes, etc. etc. and as it turned out, Adolf Hitler was the greatest danger to Germany. By playing on the fear of the Germans, and by repeating such statements, was the fear and the danger magnified. Then comes the second premise. If you see a loose brick over your door, it is a Danger, and a Danger must be eliminated.



Adolf Hitler's Logical Conclusion, accepted by many millions of Germans:



And having made this logical and "reasonable" conclusion, Hitler signed the order for the invasion of what was left of Czechoslovakia and with this stroke of his pen



Czechoslovakia was eliminated (crossed out)

Thus by playing on Fear, a vague human brain reaction, by magnifying it through repeating statements (which were not actually lies, but vague EVALUATIONS) was Hitler able to perpetrate crimes and justify them before the intelligent and reasoning German minds.

Today we see this playing on Fear on an even much wider scale. We may write in semantography



The Peoples of the East fear and are feared by the Peoples of the West
 The Peoples of the East are a Danger to the Peoples of the West
 and
 <vice versa>

Needless to say that East and West (right and left side of a celestial body seen from the standpoint of an observer) are meanings in space, and therefore relative.

People are symbolized by many, many humans on earth. In the chapter on The Citizen on page 342 ff you will find an analysis of the meaning of people, nation. It is done, just as a chemist analyses various minerals to see what he can find common in all of them. Try to analyse the meaning of nation in this way. Common language? Look at Switzerland, Canada, the United States, even Germany with her Wendes (a slav people, speaking a slav language) in the very midst of Germany. Common faith? This does not fit either. Common facial features? Same colour of hair, eyes, etc. No go. Common cultural heritage? The south of France, especially the country around Nice, is Italian in this respect. So is Corsica. How about Belgium with her Wallons and Flems? Try it as you may, you find only Humans and the Earth they tread. If you follow frontiers, you will find the people spilling over them. Besides, the symbol for limits, frontiers in semantography shows you a geometrical meaning, referring to space. You find the symbol already discussed on page IV. Space meanings are relative. So is the meaning of limits, frontiers, and it was in fact one of the much disputed issues of times past. The real THINGS in the formula reveal only Citizen of this earth, one world.

The central symbol in the above formula indicates Fear, and this is today the central feature of propaganda: the playing on fear, the magnifying it by constant propaganda.

What could people benefit by looking at the above formula? The symbols and the "grammar rules" help to make us understand the teachings of modern physics and psychology. Fear of Danger is a mind reaction, it can be magnified by words until you can't sleep at night, or wake up with a scream. But there is the question mark in the symbol. It may all not be true. It's all questionable. And the arrow symbol indicates a relative meaning too. Do not only listen to those people who turn the arrow down and make you fear. Listen and support those people who turn the arrow up



Fear



Hope

But Fear or Hope are only human EVALUATIONS. Don't trust too much any utterance containing such words. To-morrow it may be different. Many utterances of Hitler were deliberately constructed to make us hopeful. Today an interview with Stalin or Truman, containing hopeful words, gives Americans a better sleep, and Russians too, if the interview with Truman is published in their papers. They are made to fear the American leaders (and vice versa).

Having now harped a lot on Nazi and Communist utterances, I suppose the turn is now again for a whack on the rulers of the Western democracies. Should we now translate the Atlantic Charter and point out its vagueness?

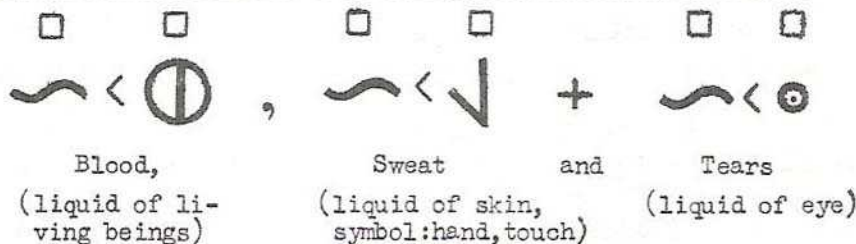
Hendrik Willem van Loon was a great writer. He also understood what a picture language could do. Some of his pictures could tell and explain more than a thousand words of his could do. No one will suspect Hendrik of being an enemy of Western Democracy. But he does not hesitate to speak in the last pages he wrote before his death (Report to Saint Peter, Harrap, London) of

"the platitudes of the Four Freedoms or the vague promises of an Atlantic Charter".

We may not know who had first the idea of this vague and ambiguous document. It may be Churchill, or Roosevelt or one of their brain trusts. But we are now "reaping the fruits" of such vague words. Today, rulers of countries, politicians and article writers, who usually do not care about other people, lose no opportunity to accuse America and Britain of betraying the Atlantic Charter, and we fidget awkwardly and nervously under such charges, and feel very much convicted.

Did the Atlantic Charter help the war effort? Difficult to ascertain. The American and the British people, after the last "war to end wars" were thoroughly disillusioned about all such high-sounding words. Churchill must have felt that way, because his greatest war slogan was quite different.

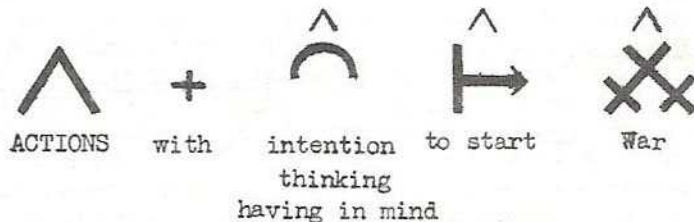
Churchill's offer to the peoples of the British Commonwealth:



No vague promises here, no platitudes, no EVALUATIONS, chemical THINGS throughout. We know, it had a great effect on the British people. They appreciated its honesty at a time when they had to fight alone.

I am sure, that we would find similar utterances in the speeches of Stalin. The Russian people put up a great fight. But today, with peace restored, the "war of words" has started again. Churchill is not more the "valiant leader of the gallant British people". He is now a Warmonger. What does this word mean?

The meaning of "Warmongering" in semantography.



This formula contains only ACTION words. But our "grammar rules" enable us to examine every symbol. There is the symbol for Start, showing a post and an arrow. We know already that an arrow indicates a relative meaning. From where does the arrow start? Ah, from the post. But from our chapter on The Relativity of Space (page 144 ff), we know that there is no fixed post in the Universe. We may ram in the post wherever we like, - but we must then state our system of reference. This we did in the above formula. We connected the relative symbol for Start to the symbol showing the Clashing of Arms. This is my interpretation of "to start war." But the relative word is still "start". Someone may ram the post in another spot. He may say: "War starts with speeches". But he can't do this in semantography, without increasing the relativity of his saying. He adds the symbol for speech, which shows the human sense symbol, referring directly to the mind symbol. Every mouth, a different opinion in a different mind.

And this brings us to the great Variable in the above formula, the mind symbol. If Mr. Vishinsky says that Mr. Churchill "is" a Warmonger, it means in other words:

"Mr. Churchill, by his actions has in mind to start another war."

The symbol thus refers to Mr. Churchill's mind. It implies that Mr. Vishinsky has been able to read or X-ray the mind of Mr. Churchill. What would happen, if we turn around and

say:

"Mr. Vishinsky, by his actions, has in mind to start another war. He is a warmonger."

Then the argument would "bounce back" on us. It would mean that now we have been able to read or X-ray Mr. Vishinky's mind. But up till now, there is no apparatus invented to examine the thoughts of man. So we can only guess, and as "guessing" is a mind activity, and it's symbol (see p. 176) carries the mind symbol, each mind may guess differently and your guess will be as good (or as bad) as mine. We both may guess that Mr. Vishinky has in mind to start another war - or he has not this in mind. Consequently we may say:

"Mr. Vishinsky	Ⓢ	is a warmonger.	or	Mr. Vishinky	Ⓢ	is not a warmonger."
	Ⓢ		and		Ⓢ	
"Mr. Churchill	Ⓢ	is a warmonger."	or	Mr. Churchill	Ⓢ	is not a warmonger."

The first mind symbol may refer to your mind, the second mind symbol may refer to my mind. And as we are not able to X-ray Mr. Vishinky's and Mr. Churchill's mind, we shall not be able to ascertain whether you or I am right or wrong. As soon as we realize this, we may come to the conclusion that it seems futile to debate about such words. Yet, such futile debates are taking place between millions of men, each day of the year.

In the foregoing page we have given an explanation of the meaning of warmonger, as a father would give it to his son, who asks: "Father, what is a warmonger?" The father might reply: "A warmonger is a man, who, by his actions has in mind to start another war." But the boy might still be puzzled by the similarity between the ironmonger Mr. Smith around the corner, and the warmonger Mr. Churchill. Another father may say: "An ironmonger trades in iron, and a warmonger trades in war." This would still puzzle the boy, Mr. Smith sells iron, does Mr. Churchill sell war? Or does he sell war material? Ah, now we are getting somewhere. There are warmongers, or war-material-mongers, those who give you even an invoice. But Mr. Churchill does not sell these goods. Neither does Mr. Vishinky.

So, we may reason, that "Warmonger" is a metaphorical expression. Look up the symbol for metaphor and its explanation on page XIII, and you may understand that such expressions are vague, relative, ambiguous and may mean anything in any and many minds.

On page X you have seen the semantical safety device for the "IS". Just add a question mark to it, and the "IS" is transformed into "MAY" or "MIGHT". Then we may write

Ⓢ?

"Mr. Churchill may by a warmonger."
might be

But if Mr. Vishinky would shout this statement into the UNO assembly, and the newspapers around the world would splash it over the front pages, the rhetorical force would be gone. The whole statement would become questionable. In semantography you see the question mark right away. If you are trained in it, you might recognize it in statements, without the need of translating them into semantography.

So we see, that such statements are made according to the Hitler pattern. They are not actually lies. They have a meaning, but this meaning will differ in different minds. If Mr. Vishinky would say

"Mr. Churchill lives on the moon"

it will be an outright lie to anybody who never heard this metaphorical expression. But once you know that it represents a metaphor, it may mean anything. If I say to you, dear reader, that "you live on the moon" I imply that you have the wrong attitude in regard of anything and everything, sex, marriage, education, politics, religion, etc. etc. Such is the working of such "transfer" in a mind (Greek metaphora).

Now some people, who still might think that every word has a definite and exact meaning, may plead for Mr. Vishinsky. They may say that the important point is whether Mr. Vishinky lies deliberately for propaganda purposes, or whether he "honestly believes" in what he says. Now, we have already the lie detector. Just imagine Mr. Vishinsky or any other diplomat of any country, before he starts to speak, gets the bandage to measure his blood pressure, the cardiograph is connected with a spot over his heart, and electrodes are fastened to measure and record the change in his perspiration. Let us imagine an improved lie detector, one which makes an alarm bell ring, when the man tells a deliberate lie. Imagine, if diplomats would be forced by law to wear such an apparatus. It may change the face of the earth. A lot of deliberate lies are told nowadays in the correct, formal, polite manner of the diplomats.

But now, Mr. Vishinsky has mounted the podium, fastened to the lie detector, and with

(XIV)

all the rhetorical force at his command, Mr. Vishinsky would cry out:

"Mr. Churchill lives on the moon. Mr. Churchill is a warmonger."

What would happen?

Well, the bell might ring. Mr. Vishinsky may be at "the bottom of his heart" convinced that Mr. Churchill is the only man, who had accurately appraised the plan of the communists and that he is not a warmonger. This means that Mr. Vishinsky has told a deliberate

But the bell might not ring at all. Mr. Vishinsky may be at "the bottom of his heart" convinced, that Mr. Churchill has made a totally false appraisal of the plans of the communists, that "Russia yearns for co-operation", that Mr. Churchill "lives on the moon" not to see this, that he wants to start another war, etc. etc. And if you press into him: "what about Greece, what about China, what about Czechoslovakia, what about Roumania, what about Poland, what about Berlin, what about the communist strikes in France and Italy, etc.?" he will have an answer for each, and he may honestly believe in what he says.

But whatever he says, we can assume (and you can read it for yourself in the papers) it will contain such vague words, referring to mind activities and meanings, as the ones underlined above. And this refers also to ^{similar} statements of Mr. Churchill.

Such is the amazing working of the mind, that some of those words which we have called human EVALUATION words, will make even the speaker believe that what he says is true. Torquemada, the Grand Inquisitor, who had many thousands of people tortured and burned on the stakes, and most of the other inquisitors in the other European countries, may have honestly believed that the fire has "cleansed" the souls of those heretics, that they have "bathed" their sins, and that all evilness has been burned away. And millions upon millions of true believers may have honestly believed that this "is" so.

And so we see in our times the magic of words at work again. An honest - or dishonest (whatever this means in communist or anti-communist terminology) Vishinsky can cry out that

"Messrs. Churchill, Bullitt, Marshal, Truman, etc. etc. are all warmongers"

and millions of honest communists, sympathizers, fellow travellers, and even "non-political" newspaper readers will honestly believe that this "is" so, especially if they see it printed again and again, like so many advertisements.

And these advertisements are completely gratis. If the propaganda bureau of the communist parties (or other parties) would have to pay for those precious spaces on the front pages, they would have to distribute millions of dollars every day to newspapers all over the world. But the greater the vituperations, the viler the attacks, the harsher the words, the more they are NEWS, the more they are printed and read.

And so we see how a fusillade of vague words creates havoc every day among the millions of citizen of many nations, almost among every family.

Discussion at breakfast in a home in the U.S. or Canada, or Great Britain, France, etc. etc.

Cast:

Father

Mother

Son (21 years)

Son (reading the morning papers): "These warmongers in Washington."

Father: "I think the real warmongers are sitting in the Kremlin."

Son: "The Russian leaders are progressive."

Father: "America is the country of progress."

Son: "America is Imperialist."

Father: "What about Russian Imperialism, swallowing up the Baltic states and others?"

Son: "They have brought Liberty to these states."

Father: "That's why some of them brave the Atlantic in small sailing boats to escape to the land of liberty, America."

Son: "Those are fascists."

Father: "What, Italians?"

Son: "Oh, father, you are old-fashioned."

Father: "So I am old-fashioned, am I? I will tell you what you are. You are..."

Mother: (interrupting) "Stop this. Isn't it a shame, two grown-up men throwing words at each other. What do you mean by warmonger, progressive, imperialist, liberty, fascists, old-fashioned?"

Son: "I know very well what I mean by these words."

Father: "And I know just as well what I mean by them."

Mother: "But apparently the same word has just two different and opposite meanings for both of you. Why don't they teach people the meaning of words in school?"

Note: You will find the symbol for Imperialism on page 521 in the third book.

And so we see how a rift is created, which cuts through the nations, through the communities, through the families, and this rift widens every day/this kind of propaganda goes on. When a third world war should start (let's hope, we can avoid it), a war about the meaning of such words, then there will be "fifth columnists" in every company, in every trench, in every tank, in every ship, in every airplane, in every office and in every workshop. And these boys will not consider themselves as "traitors" to their country. They will honestly believe that they are the real fighters for Freedom. Such is the power of words.

On the other side, this rift is not allowed to develop. Whereas in the Western countries the newspapers can print any vituperation against the rulers of their countries, this is not allowed in the Eastern countries. According to the Soviet Constitution there is

FREEDOM OF SPEECH

"provided it is in conformity with the interest of the toilers and in order to strengthen the socialist system."

We have already analysed this formula and have written it down in semantography in the foregoing pages. We can use this formula for any country and for any -ism and -ology.

FREEDOM OF SPEECH

"provided it is in conformity with the interest of the German, Italian, Spanish people, and in order to strengthen the national socialist, fascist, falangist system."

This formula enabled the secret police in these countries to commit any crime and still believe that they are right, that what they do is in "conformity with the interest...."

FREEDOM OF SPEECH

"provided it is in conformity with the interest of the Christian people and in order to strengthen the only true faith."

Thinking along these lines made the Roman Catholic Torquemada and the Protestant Calvin burn people on the stakes who happened to have another opinion and said so. And Torquemada, Calvin and the thousands of other inquisitors believed that what they did is "in conformity with the interest...etc."

FREEDOM OF SPEECH

"provided it is in conformity with the interest of the French people and in order to strengthen the French Revolution."

This formula explains why, one by one the French revolutionaries mounted the steps to the guillotine, sent there by their very comrades of the Revolution. Just a difference of opinion. And the revolutionist tribunals were firmly convinced that what they did is "in conformity with the interest...etc."

FREEDOM OF SPEECH

"provided it is in conformity with the interest of the people of the United States and in order to strengthen United States democracy."

Somewhat along these lines, the committee for the investigation of un-American activities carries on. There is, however, one difference. They can summon you, but they cannot deport you to Alaska, or put you to the wall, or just make you disappear. But put the above lines into the Constitution, appoint a federal chief from those ranks, (who even today in private initiative pull people out of their bed and hang them because they are not "in conformity with"), invest him with all the necessary powers, and

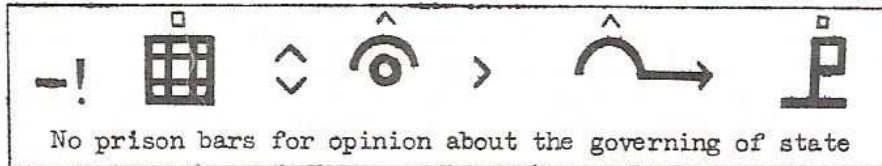
IT WILL HAPPEN HERE.

Now, after all these analyses, you expect me to draw up a formula for the meaning of Freedom and Democracy. I have not shirked this task, I am an industrial research chemist and I have not shirked the handling of highly inflammable and highly explosive matters. For two years, six days a week, I handled carbondisulphide, a liquid more inflammable than ether and benzene. And I heated the vapours up to a temperature of over 2000° C with the inside of the furnace an incandescent white. And I handled other explosives. But I was not afraid, because I knew the formula, which told me of the structure of those explosive "meanings". And using the method of the chemist, I have drawn up the formula for Democracy. You will find it in the chapters in the third book (pages 477 to 529) Don't expect a few symbols only. It is a complex formula, just as that of a complex chemical compound. But, once you get the idea, you can read every single group in this formula - and they have a similar meaning in different languages, just as a chemical formula has.

The central group shows you the structure of how the people can influence the governing of their affairs, and just as with a chemical formula, you realise the inherent danger, depicted by the symbols. In any case, it has to do with elections. Then you find another

(XXV II)

group, expressing the meaning of Freedom of Speech and this we will write down herebelow



Explanation

of the	minus	window	ACTION	ACTION	flag
symbols:	without	with	of mind	of mind to	symbol over
		iron bars	& mouth	lead onwards	territory

Looking at this formula we realize the presence of the great variable, the mind symbol. You can see your mind, which ventures an opinion through your mouth, and you can see the mind of that person (or persons) who leads the country onwards. Naturally you two believe that the country should be led forward. But whatever your opinion is whether the country is led forward or not led forward, you can't be sent to prison for your opinion. There are relative symbols in the picture, because each mind is a different system of reference, but there is a chemical THING in the formula, which is real, an enclosure with iron bars, or barbed iron wire, and if you want to be more precise, you can add the three dimensions of the allotted space say 6 x 10 x 8 ft.

I hope that boy scouts all over the world will take up semantography, because it gives them a medium, unheard of; they can write to any other boy scout, no matter what language he speaks, each on writing in their respective mother tongue. As you see the symbols are simple. When they meet at their jamborees, they may proudly display such lines as above - if the formula of their countries' democracy contains this line.

Anyone, who has ever worked in a team, knows that the above meaning has a direct influence on the achievements of the team. I have worked under a boss, who let no other opinion pass, and who fired anyone who ventured one. And I have worked under another boss, and I have been a boss myself, and anyone of the team could venture his opinion, and could criticize. The results were measurable, lower costs, greater output, harder material, longer run, etc. etc. And a community is a great team, and there are many problems in a community, similar to the problem in a factory: water supply, health & work rooms, conditions, etc. etc. not the least of them is the peace of mind and the satisfaction of the men and women in the team. The above formula is written for the working of a great community of a state. For a factory, it can be written differently, omitting the prison bars. But in state-owned factories, with totalitarian rule, the prison bars are a hard reality.

And the results are measurable. For me, a practical engineer with a life-long experience, there is no doubt, why 7 millions of labour slaves in Germany produced only "junk", which soon broke down. For me there is no doubt, why the standard of living (measurable and weightable in chemical THINGS and physical ACTIONS) is greatest in those countries, where there is Freedom of Opinion, as depicted in the above formula. There is a meaning in the word Democracy, but we must not use this word in the wholesale manner, as it is used today, each mind meaning something different, but we must refer to each group in the formula.

There is Democracy in Russia, for instance, people go to the polls, but we do not find in the Russian formula the above formula, which "neutralizes" the effect of the election formula.

In the formula for United States Democracy we do find the above formula, and consequently we find another formula: OPPOSITION PARTIES. However, we find that not all voters can go to the polls. Consequently the election formula is restricted, and this restricts the meaning of Democracy in the United States.

And so we can go from one group formula to the other, weigh and compare the THINGS and ACTIONS. And if we teach each other to treat the meaning of this complex compound like a chemist, we will stop saying that this country is democratic and the other is not. Instead we may say: "democratic IN SO FAR AS..." and point to the group formula, and realize the relative meanings.

Some readers may have read the foregoing pages with growing misgivings and displeasure. I want to remind them, that according to my own theory, whatever I said, is only my own opinion, of no importance whatsoever, and valid only in regard of my system of reference, my mind, and valid only at the time I wrote it. Now reading my own writing, I don't like much of it, and I would like to re-write it, realizing, that many of my relative words will be understood differently by other minds.

Furthermore, I beg you to understand that I write at an advanced age. I've passed 51 already. My writing therefore reflects the great disappointments which I suffered in my life, and which we, at different times, suffer together. I believed in the progress of man, and I still believe fervently in it, therefore my disappointment, that others have interpreted

this meaning to foster their own aims, to satisfy their craving for power and to bring utter destruction to peoples and countries. In the name of progress they have committed the most unheard-of crimes, and even today, deportation, slave labour and murder is covered by the name of progress.

My second great disappointment has growing steadily during the last 30 years. I have fervently believed that the theories which are covered by the name of socialism will bring about the society of which we all dream. A society in which no one goes hungry, in which no one will be afraid to be hauled off in the dead of night, in which everyone can express his opinion without fear to lose his head, and together, can elect or reject those men who are entrusted with the care of the community. Some peoples have already achieved these aims, as expressed in the foregoing 4 lines, but the greater part of the globe is filled with peoples who can only dream of these things.

My third great disappointment has started with the end of the great war in 1945 and it convulses me with renewed force every day I take the newspaper in my hand. The peoples have believed that the United Nations who have defeated the "Axis" forces in Europe and Asia will now draw together and - we still believe - that they can prevent war effectively. Instead we realize with horror that a third world war seems to be only a matter of time, a few years perhaps.

There is a "war of words" going on now, and we may assume that it will lead to a general clash of arms, to the falling of bombs, to the destruction of cities to the mass killing of peoples - if we still continue in our "muddled way of thinking" as the physicist Sir Richard Paget called it. The linguists have already realised (since the last 100 years) that "language is the vehicle of thought" (Lewis) and by using language we can influence the thought of people. This seems to be a platitude, but the last world war has proved that this brain mechanism, brought into play by unscrupulous men, can destroy a continent. Now we see that similar forces are at work to destroy the peace of the world and in the end to destroy the world.

There is one possible remedy - to adopt the method of the scientist, to analyse the words, to analyse our thoughts and to learn how to handle "inflammable" and "explosive" meanings, which by their very vagueness can do infinite harm. By seeing the "things behind the words", by using the method of the chemist, who weighs and measures the real things, not the words for them, may we be able to recognize those men, who feed us with words, instead of the things. We can translate now vague words and draw up a list of the minimum of things for the members of the human race, expressed in calories, in floor space of dwellings, halls and churches, where we can live and think and speak, without a secret police knocking at the door. Ask the scientist and the engineer and they will tell you that this minimum can be achieved - and the first thing to do for us, is to adopt the language of the scientist and the engineer. There is a difference between their language and the language of the politician, and we must study these differences and the meaning of the words we use. M. M. Lewis, the author of a recently published book "Language in Society" (Nelson and Sons, London) (196) says:

"We need men, and groups of men, who will devote themselves to the new discipline - the social semantics of language."

We seem to be convinced that education, and especially education in citizenship will remove the threat of war. But when we look from this point of view upon the human beings of this planet, we find that about 75% are illiterate, or 3 people out of 4. Yet, we may think that we could educate the peoples of this earth in citizenship without teaching them how to read and to write. The same author, Lewis, provides us with the astonishing evidence, that it was so far impossible to induce illiterate people to use improved methods of agriculture - without learning to read and write. "Universal adult literacy is the first essential in the organisation of a community for the improvement of techniques of living."

In other words, we must start to teach more than 1 billion and 500 million of people first to read and to write, before we can educate them in citizenship. This is an enormous task, considering the fact, that there are more than 3000 languages on this planet, and a textbook or primer which may be used for the villages in a plain, may be useless for the villages behind the mountain. The written words are symbols, and these symbols are different in different languages, and moreover many are vague in meaning. Lewis asks:

"How are societies to use symbolic communication not to destroy, but to build; not as a weapon of war but as the chief means of achieving unity of thought, feeling, and action? How?"

Semantography can be this medium. Primers can be printed (with pictures and the symbols) for the whole world, for every country and for every people. And semantography can enable the people to recognize the vague meanings and translate them into real ones.

Read now the following list of chapters, stretching over more than 600 pages, the work of a practical engineer, and then, read the whole book.

DEDICATION

This book about a new kind of common "language" is dedicated to those, who understand another common "language".
That other common "language" goes further than the common language of music, further than the common language of love

That other language is spoken with eye and heart only, and understood at the risk of death.

In our time and in all times men and women have answered that language and have died for it.

In the dead of night - a knock at the door!
Outside a human being, persecuted and hunted. A strange face from a strange country, speaking a strange language.
But the eyes speak - that other language.
To answer means almost certain death to the whole family.

Can we ever imagine the torments, the fear, the anguish, the desperation and the agonies of those men and women who answered that language?

Down in the cellar, amid rubbish and cobwebs lives a human being. No, it seems to be no human being any more. It shivers and trembles, it rots and decays. For months and for years, it has not seen the gold of the sun, the blue of the sky, and the green of the land. But his eye shines through the darkness and meets the eye of his saviour, who brings him a share of his own meagre ration.

Their eyes speak with each other and they give courage to each other. Don't be afraid Brother, Sister! Let's hold, hold out, until - until the catchers came and led them both away. And let them dig their graves first.

But many lived to breathe again without fear.

To you Brothers and Sisters, who answered that language across the barbed wires of race, creed, nation, language and misunderstanding - to you this book is dedicated.

In your spirit - the future will be built.

T H A N K S

To my father and mother, whom I owe all I am and who are not more with me. To my wife for all her encouragement and for her infinite patience. She read every page of every manuscript of which four were torn up. Thanks to Mr. J.C. Lindsay of London, who helped us so much.

I am indebted to Mrs. Betty Stoltenhoff, Assistant Secretary of the Australian Psychology Centre for all her advice and help. To all my friends who showed interest in this venture and who encouraged me throughout the 6 years of work, my deep gratitude.

"NEARLY THREE HUNDRED YEARS AGO

it began to dawn upon a few human minds that language, instead of being left to the hazards of a slow evolution, could be intelligently interfered with and directed towards a desirable goal...

One linguistic discovery of the seventeenth century is of special importance, because it suggested a possible remedy for the confusion of tongues. The labours of Jesuit missionaries diffused new knowledge about Chinese script. To seventeenth century Europe, Chinese, a script which substituted words for sounds, was a wholly novel way of writing. Still more novel was one consequence of doing so. To the reader of The Loom of Language it is now a commonplace that two people from different parts of China can read the same text without being able to converse with one another. To seventeenth century Europe it was a nine days wonder, and the knowledge of it synchronized with a spectacular innovation. Symbolic algebra was taking new shapes. The invention of the logarithms and the calculus of Leibnitz, himself in the forefront of the lingu-

linguistic movement, gave mankind an international vocabulary of computation and motion.

Without doubt, the novelty of mathematical symbolism and the novelty of Chinese logographic writing influenced the first proposals for a system of international communication through script. Leibnitz corresponded with Jesuit missionaries to find out as much as possible about Chinese; and Descartes, the French philosopher-mathematician outlined a scheme for a constructed language in 1629...

In 1661 George Dalgarno of Aberdeen, also author of a language for the deaf and dumb, and inventor of a new type of shorthand applicable to all languages published the Ars Signorum, or Universal Character and Universal Language.

In 1668 Bishop Wilkins, one of the founders of the Royal Society, published the Essay towards a Real Character and a Philosophical Language...

The ambition of both was to design something that would be speakable as well as writeable...

Their continental contemporary Leibnitz, famous for introducing the modern symbolism of the infinitesimal calculus, knew something of Dalgarnian as well as Wilkinsian, and rejected both of them for not being "philosophical" enough. Since the age of nineteen he had dreamed of a language which was to be "an algebra of thought" in the service of science and philosophy...

When he took up the task of providing his dictionary or conceptual catalogue with a grammar, he broke new ground.

Unfortunately he never put his views into book form. They remained unnoticed by all his successors with the exception of Peano, a twentieth century mathematical logician who also invented Interlingua. What puts Leibnitz far in advance of his time is that he recognized the scientific basis of intelligent language-planning...

...he is way in front of Esperanto. He shoots ahead of many of our own contemporaries - Peano apart...

...all this tallies with the fruits of research in comparative grammar two hundred years later. Leibnitz was far ahead of his time in other ways...he anticipates Ogden's Basic by embarking on an analysis of the particles to ascertain their meaning and the requisite minimum number...

Still it is not fair to say that the efforts of Dalgarno, Wilkins, or Leibnitz were fruitless. It may well be true that international reform of scientific nomenclature initiated by Systema Naturae of Linnaeus was catalysed by controversy which his more ambitious predecessor provoked. The movement which came to a focus in the Systema Naturae encouraged revision of chemical terminology with results which its author could not have foreseen. It created an international vocabulary of Latin and Greek roots. In a sense, though unwittingly, revision of chemical terminology realised Wilkin's dream of a real character. Modern chemistry has a vocabulary of ideographic and pictographic symbols for about a quarter of a million pure substances now known."

from "The Loom of Language by Frederick Bodmer, edited and arranged by Lancelot Hogben, inventor of Interglossa, author of "Mathematics for the Million", "Science for the Citizen" etc. (5)

A P O L O G Y A N D E X P L A N A T I O N

"Tous comprendre c'est tous pardonner."
"Understanding all is excusing all."

French Proverb

"It is only natural that proposals for new international languages and the like are usually put forward by people inspired by such a burning zeal that they set out their idea with a showmanship and skill of someone trying to sell his wares."

Stanley Rundle (15)

Well, this quotation seems to be a pretty fair judgement of the inexcusable manner in which the preface of this book titled INTRODUCTION AND SUMMARY has been written. A preface contains the usual apologies and the confessions of guilt about all the shortcomings for which the author assumes full responsibility, etc. Instead of, the preface of this book contains so many wild assumptions and incredible boasts that, no doubt, most people got very much annoyed. If there is still a little bit of good will left in the reader, he may - so I hope - accept this apology and explanation. To understand what beset the author means - at least partially - to excuse him.

Admittedly the boasts are preposterous. But the end may justify the means. The end is to attract the interest of the reader. This book, judging from the title, does not look like entertainment. It puts up an appearance of science. Now, people interested in science are simply flooded with publications. It is a sheer impossibility for anybody to read all the books, even in one's special sphere only. The best he or she can do, is to glance through the pages and put the book away for reference sometimes later - perhaps. Publishers of scientific literature have realised this and they print an introduction and summary to most books and articles.

Now what the author wanted to prevent at all cost is a yawn on the part of the reader. If it can't be an approving nod and a quickening interest, at least it should be a gnashing of teeth. Because this at least is a sign for an interest, although an interest bearing the negative sign - . This chapter tries to convert the - into a † .

READABLE IN ALL LANGUAGES.

This preposterous boast must have exasperated any linguist and even anybody who has some knowledge of a foreign language. It may mean that a sentence written in semantography could be read right away in any, no - in "all" languages. And we know that languages vary considerably in their word order and sentence construction. As Leonhard Bloomfield put it:

"It is enough for us to know that nearly all the structural features of our language which we are inclined to accept as universal - features such as the actor-action

sentence, the elaborate part-of-speech system, or the special inflections of our noun and verb - are peculiarities of the Indo-European family of languages and are by no means universal in human speech." (16)

Now that boast "readable in all languages" never intended to mean that a sentence in semantography can be read word after word in any language. It is to be understood that the reader would (1) glance over the symbols comprising the whole sentence, would then (2) get its meaning and would then (3) translate it in the proper word order in his native tongue. Actually this is the way how all translations are done. If we have to translate a sentence from French in English we would first glance over the French word cluster for instance

Qu'est-ce que cela?

But we would never translate it in the same word order as

What is this what this that?

After we got its meaning we would say:

What's this?

Consequently the semantographic symbols

? ⌚

will be read by an

Englishman: What is the time?

Frenchman: Quel heur est-il maintenant? (What hour is it now?)

Spaniard: ¿Qué hora es? (What hour is?)

Russian: сколько час? (How much hour?)

Chinese: 你的金表幾點占金鐘 (What time is it by your watch?)

To cite Prof. Bloomfield again:

"A graph like 71 is read in English as 'seventy-one' in German as 'one and seventy', in French as 'sixty-eleven', in Danish as 'one and half-four-times' (sc., 'twenty') etc." (16)

Even a Trobriand Islander - if he were to learn semantography, or only the numerals 1 2 3 4 etc. in the mission school - would be able to express the meaning in his language (totally different from ours) which Prof. Malinowski has studied so carefully and on which he gave such an admirable account in "The Meaning of Meaning" (17).

DEMOCRACY, NATION AND OTHER CONTROVERSIAL TERMS

If the linguistic treatment of words, grammar, syntax, etc. in this book may have exasperated the linguists only, the controversial chapters may exasperate anybody who has his own opinion about world events. "Why on earth," would friendly people cry, "did he need to touch such inflammable material in a book on a symbol writing. Instead of friends, he is going to make a host of enemies!"

Why indeed? In fact, I never intended it. When I started to build up my symbol vocabulary, I never thought that I would have to go into that. I had before me the 850 words of Ogden's Basic English and I constructed a symbol for each of those 850 words. Then I thought the task would be simple. To write down a word like democracy I would simply have to look up The General Basic English Dictionary, giving more than 40.000 senses of over 20.000 words, in Basic English (18) (published by Evans Brothers Limited London) and there I would have it neatly compiled in a few words of the 850 Basic words

DEMOCRACY, Nation with representative or other form of government by the public; society in which all men are looked on as equal.

Well, this definition contains just 22 Basic words and all I have to do, is just write down my 22 symbols for those 22 Basic words.

It looks simple, doesn't it? But there was no go. The very few words nation, representative, government, public, society, equal, defied translation into geometrical lines.

If I would have chosen geometrical lines, totally arbitrary like \mathcal{N} for nation, \mathcal{R} for representative, \mathcal{G} for government the thing would have been quite simple, but this would exert a heavy strain on the memory and moreover, I had set the principle for this new kind of writing as follows:

NO ARBITRARY SYMBOLS. EVERY SYMBOL MUST DIRECTLY OR INDIRECTLY, SOMEHOW OR OTHERWISE, INDICATE GEOMETRICALLY THE GEOMETRICAL STRUCTURE OF REAL THINGS.

An exception is to be made only for those arbitrary symbols which are already used internationally like ? ! % () - + x - etc.

So the symbol for nation must show geometrically the real things which constitute a nation. A symbol for representative must represent geometrically the meaning of to represent. The symbol for government, public, society??? - then I realised that I have got myself into a terrific mess. A wise man would have given up. Only a fool would have continued. I choose the latter course.

The following paragraphs will explain why the construction of an international spoken language is so much more simple than the construction of such a kind of symbol writing.

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HOW AN INTERNATIONAL LANGUAGE IS MADE.

During the last 100 years more than 300 proposals for an international language have been published. To use a metaphor, all those proposals are like different imposing buildings which are very cleverly constructed. Now we must distinguish between the different structures which the inventors have designed and the stones which they have taken from some quarries. The structure is the grammatical system, the prefixes and suffixes, the word order, etc. All this constitutes the ideas of the inventor. But now come the stones which represent the words. And here, with certain exceptions, the originality of the inventors stopped. They choose the stones where they could find them. And their quarries were the languages. Some took their stones exclusively from Latin, like Peano (Interlingua), some exclusively from Greek, like Hogben (Interglossa), some from Greek, Latin, German and Russian, like Zamenhof (Esperanto), some like Rosenberger (a practical engineer) and his co-workers examined the quarries of English, French, Italian, Spanish, Latin, German and Russian and chose those which he could find simultaneously in all or the most of these quarries. Consequently his Idiom Neutral has a "vocabulary of greatest internationality, almost exclusively Neo-Latin" (Guérard). The fault with all these vocabularies is, that they entirely neglect the languages of Africa and Asia.

But from our point of view, words in all languages have one great and even irreparable fault. They are arbitrary sounds only, with no inherent meaning - with no direct or indirect indication of the real things. Does the sound w-a-t-e-r indicate really water? Or does a-q-u-a, or e-a-u or a-g-u-a or v-o-d-a indicate that liquid better? No, these sounds have no direct or indirect indication of the real thing. The word sound s-p-l-a-s-h contains such an indirect indication because it imitates the sound produced by throwing a thing into water, but such sound imitations like splash, gong, bang, crack of the whip etc. are only a small minority in the languages.

So it comes that a lot of homophones (same sound) exists in all languages. The sound board means a piece of wood and a committee of men. The sound match means a stick of wood to make fire and a marriage. Is there any sense in this? No, its silly. And what means the sound c-u-l-t-u-r-e? For ten people it may have ten different meanings. The result is a mess of misunderstanding. As Ogden and Richards wrote in The Meaning of Meaning:

"It is not surprising that a consideration of the ways in which language has been made to serve mankind in the past should frequently lead to a sceptical reaction. As an able but little known writer has remarked:

"Suppose someone to assert: The gostak distims the doshes. You don't know what this means; nor do I. But if we assume that it is English, we know that the doshes are distimmed by the gostak. We know

know too that one distimmer of doshes is a gostak. If moreover the doshes are galloons, we know that some galloons are distimmed by the gostak. And so we may go on, and so we often do go on."

Well then, can we find anything in the sound p-e-o-p-l-e or n-a-t-i-o-n- or in the Greek word d-e-m-o-s (meaning people) which indicate a multitude of human beings? No, we can't.

These are arbitrary sounds only.

So we must come to the conclusion that most words in all languages have no direct or indirect indication of the real things. In alphabetical writing any sound may be made to stand for anything.

So the language planners had actually an easy job. They could take any sound, say gostak and decree that it should mean people! Take it or leave it.

BUILDING A GEOMETRICAL LANGUAGE.

A "geometrical language" could only be a "written" language. But here at last is a possibility to indicate the real things by geometrical lines which follow the outline of real things in real space. Here at last is a possibility to abandon total arbitrariness and invent a "language" which could be "truer" than arbitrary sounds are.

When the pioneers started out, 300 years ago, to invent such a "geometrical language" they failed to realise this. They build up their geometrical "words" with totally arbitrary lines, which in no way indicated the real thing. Consequently their system imposed a terrific strain on the mind of the learner to memorize all those queer and arbitrary lines, the same strain which is imposed on the learner of a foreign language to memorize all those queer and arbitrary sounds, which constitute the vocabulary of any language.

This arbitrariness of words - totally disconnected from the real things - imposing tremendous strain on the frail human mind, seems to be the real cause why most of our learning of foreign languages failed, why Esperanto and any constructed sound language failed and why the arbitrary geometrical languages have failed.

To understand this, it will be very instructive to have a glance at previously invented geometrical languages. This will help us also to realise the important difference of this system of semantography - in which every symbol must indicate directly or indirectly the real things of our real world.

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THE PIONEERS OF A CONSTRUCTED GEOMETRICAL LANGUAGE




































In 1661 George Dalgarno of Aberdeen published his *ARS SIGNORUM* or *UNIVERSAL CHARACTER AND PHILOSOPHICAL LANGUAGE*. (5) It consisted of geometrical signs indicating 17 classes of notions, with other signs indicating subclasses. But Dalgarno was not satisfied with a written language only. He wanted it to be spoken too. And so, besides his geometrical signs for his classes, he allocated a letter from the alphabet to each of them. K = political matters, N = natural objects etc. Subclasses were indicated by vowels, thus Ke = judicial affairs, Ki = criminal offences, Ku = war.

As H. Jacob (19) said:

"Dalgarno's system shows the complete lack of a practical basis, it is purely artificial and difficult to learn. Yet it had the merit of being the first concrete contribution to a problem which was so early recognized!"

Seven years later John Wilkins, Bishop of Chester, one of the founders of the Royal Society, invented his *REAL CHARACTER AND PHILOSOPHICAL LANGUAGE* on similar lines as Dalgarno. Herebelow is a facsimile of one page of his book, showing the principal geometrical symbols for his classes.

Chap. I Concerning a Real Character 387

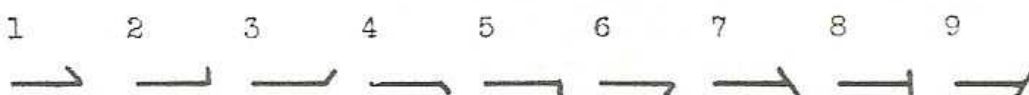
<u>TRANSCEND.</u>		<u>ANIMALS</u>		<u>ACTION</u>	
General		Exanguious		Spiritual	
Rel. mixed		Fish		Corporeal	
Rel. of Action		Bird		Motion	
		Beast		Operation	
Discourse		<u>PARTS</u>		<u>RELATION</u>	
God		Peculiar		Oeconomic	
World		General		Possessive	
Element		<u>QUANTITY</u>		Provisory	
Stone		Magnitude		Civil	
Metal		Space		Judicial	
<u>HERB consid. accord. to the Leaf</u>		Measure		Military	
		<u>QUALITY</u>		Naval	
Flower		Power Nat.		Eccles.	
Seed-vessel		Habit			

Shrub		Manners	
Tree		Quality sensible	
		Disease	

The Differences are to be affixed unto that end which is on the left side of the Character, according to this order;



The Species should be affixed at the other end of Character according to the like order.



(End of facsimile)

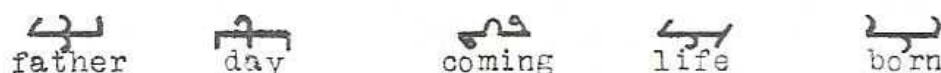
In order to read and write these symbols the knowledge of a vast catalogue of notions is necessary with all the divisions and subdivisions into "Differences" and "Species", which are indicated by the small lines at the end of the horizontal basical line which is found in all symbols (see above). Herebelow is an example, the symbol for



explained by Wilkins as follows:

"DAY. This generical character is appointed to signify the genus of Measure. The affix on the left hand, making a right angle with the lower side of the Line, signifies the fifth difference, which is Measure of Time. The affix at the other end, making the like angle doth denote the fifth Species, viz. Day Natural, which is described to be the time of the Sun's motion from one Meridian to the same again." (5)

Herebelow are some other "words" constructed by Wilkins for the complete translation of the Lord's prayer and the Creed



We see at once that all these symbols are wholly arbitrary. They do not indicate in any way the geometrical outline of the real things which they represent. As said before, to read and write Wilkins characters you have to know by heart all the divisions and subdivisions of the vast

(48)

vast catalogue down to every notion. This would impose a terrific strain on the human mind. Moreover "any addition to knowledge, a single discovery, a fresh interpretation, calls for a complete overhaul of the catalogue." (Bodmer-Hogben).

Other attempts on a philosophical symbol language were based on similar classification systems. The disciples of Condillac, the Ideologists, took up the problem of an artificial language considered solely as a classification and an abstract notation of ideas... Many numerical languages have been devised upon that principle of classification; the latest... is Timerio... 1-80-17 I love you." (Guérard) (2).

The great mathematicians Descartes and Leibnitz occupied themselves with this problem without however publishing a single geometrical symbol.

"Leibnitz knew something of Dalgarnian as well as Wilkinsian, and rejected both of them for not being "philosophical" enough." (Bodmer-Hogben) (5).

"What Leibnitz desired was a script or notation similar to that of the Chinese, but "better than theirs" and he thought that this "might be introduced if small figures were employed in the place of words, which would represent visible things by their lines, and the invisible, by the visible, which accompany them". (Ogden-Richards) (17)

(Italics are mine, also in the following quotation)

Ogden and Richards sum up the situation as it is today:

"But this speculative construction, which first occupied his attention at the age of 18, and was constantly in his thoughts, especially about the year 1679, and when it became clear that he would not have the strength to proceed with it, still remains where Leibnitz thus left it" (17)

STAKING THE CLAIMS FOR SEMANTOGRAPHY

The foregoing representation has been given to show the reader what has been done in this field before. This is necessary in order to recognize any advancement and advantage of this new system, in which every symbol must, directly or indirectly, indicate the geometrical structure of the real things. This would firstly remove the arbitrariness and would help the memory and secondly, would make this writing nearer to the actual structure of our world and therefore "truer" than phonetic writing.

Semantography starts therefore where the caveman started: in drawing the outline of things. Chinese writing, which is a naturally grown picture writing, started similarly. But during the thousands of years, Chinese calligraphists modified the lines until the outline of the real things was more or less lost. To this came philosophers and poets who added queer arbitrary characters to indicate special philosophical and poetical notions. Today, Chinese writing is overloaded with complicated and cumbersome characters. Still, the outline of the things are discernible in a number of them. The reader may peruse the list on the foregoing pages 6 - 8.

Here now are the claims for semantography:

1. It is a new system of symbol writing readable in all languages, "truer" in meaning than phonetic writing.
2. Every symbol must indicate directly or indirectly the real things of our world, with the exception of
3. Already internationally recognised symbols, which are incorporated because of their internationality.
4. The symbols are devised as simply as possible to be typable on an specially adjusted typewriter of ordinary size.
5. A new kind of grammar, based on the natural sciences,
6. Easy recognition of fallacious and controversial terms.

Taking these features into consideration and comparing them with what has already been done or not done in this field, semantography may be regarded as a novelty.

BUT WHY THE DABBING IN POLITICS?

From the foregoing paragraphs it becomes apparent that the methods of the linguists who planned Esperanto, Ido, Interlingua etc. could not be used to write down geometrically the notions of people, nation, government, democracy, etc.

An arbitrary word like nacio (Esperanto) or naciono (Ido) to stand for nation is simple to invent. But in a geometrical writing, the symbol for nation must show the real things, the human beings who form the nation. However, the mere outline of human beings would apparently not be enough to indicate what we understand by nation. So what do we understand by this word? Many human beings speaking the same language or having the same faith or similar bodily features? But there are nations where different languages are spoken, different religions adhered to and where the people have the most diversified bodily features. So what is actually the meaning of the word nation?

The reader may already realise the great difficulties which the construction of semantographic symbols encountered. The dictionaries were of no help. So the reasoning of the chemist and physicist had to be employed. I had no intention to go into all these political matters. It was forced upon me by the principle of semantography - and by my critics.

"If you claim that semantography is a writing, "truer" than phonetic writing," they said, "then write down government of the people and let's see if your symbols say more than words about it!"

You see, there was no way out of the difficulties than to face them.

So these controversial chapters had to be written, and no doubt they may antagonize a lot of readers. But many readers may perhaps think that the new approach is helpful to understand the meaning of such words. After all the world is in dire need of any new approach to these inflammable matters.

RELIGION

If some chapters may antagonise the linguists, and some other chapters repel the politically minded readers, some other chapters may make religious readers shudder in horror. In fact, I myself was appalled by the aspect, but again there was no way out, than to face the facts.

The words above, below, forward, backward have no meaning in empty space. To give them a meaning we must establish a system of reference from which we measure (above the sea-level, below this mark) The semantographic symbols for these words indicate clearly the relativity of their meaning.

In the same way, geometrical symbols for good, bad, right wrong show that they have no absolute meaning, unless we establish a system of reference. The great founders of religions have established such systems of reference, which are similar in the great religions. We call it ethics.

But unfortunately many people do not adhere to it and so each person establish his own system of reference and judges only according to his own mind what is good and what is bad, right or wrong. The result is this miserable "world of ours" with all its human afflictions.

Well, the semantographic symbols for these notions show clearly the relativity of their meaning and they caused me a great lot of worry. Consequently I did a lot of stammering and explaining throughout the book, until I came to the last chapter. By the preparation of it, I came across a paper of a great psychiatrist, who advocated the very same treatment of these notions as the basis of a nation-wide re-education for the preservation of peace. He even referred to the Bible in support of his theory. After that I felt a lot better, and I made full use of his paper for quotations, but I am still much worried about the reaction of many readers.

A PLEA FOR UNDERSTANDING

I beg to apologize for all the shortcomings of this book of which I am very well aware. I hope that all explanations will help towards understanding the great difficulties which I had to face. Perhaps - so I hope - semantography may really be of some help. It all depends now on the readers.

The greatest difficulties are still ahead: to convince the people in authority and to bring them so far, that they should give the idea a try-out. Every reader could help towards the realisation of this aim. Then all the labours of six years will not be in vain.

B O O K I.

B R I D G I N G T H E L A N G U A G E S

T H E C A S E F O R S C I E N C E

"The hope of the world are the universities of the world."

Walter Murdoch (1)

"All nationalities have the honour of publishing their scientific productions in their own languages so that there are now scientific works not only in all principal European languages, but also in Roumanian, Czech, Magyar, Armenian, Japanese. The confusion of languages in scientific publications have grown to such an extent that the great scientist Max Müller has been induced to appeal - but in vain - to his confreres to restrict themselves to the six languages English, French, German, Italian, Latin, Spanish. This however would be a very insufficient remedy. For where is the student who could learn only to read those six languages?"

Report of the American Philosophical Society, 1887 (2)

"Scientists have such vital need of co-operation that they will gladly clothe their thoughts in the language that will be common to their international fraternity, just as they did of old in Latin."

E. Sylvia Pankhurst (4)

The language Babel is a serious handicap to science and in turn to industry, commerce, traffic, etc.

Scientific research suffers foremost. Important publications and reports are printed in too many languages, in small and costly editions, many of them out of reach, financially and (because of language) spiritually, for the great fraternity of science workers.

The result is that costly equipment, costly work and costly thought are sometimes spent uselessly to arrive at scientific data already published somewhere in a less known language. Scientific international co-operation, the magic key to past successes, is seriously endangered.

The victims are not only the scientists but the nations. All the blessings which science has bestowed on mankind in defeating diseases, raising the crops, uncovering the riches of the deep and producing new materials and new amenities, all this, and much more, has been made possible only by the active co-operation of the men in science and the men in industry. The men engaged in commerce and traffic have done their share to bring this within reach of the average man.

Every man and woman, concerned with the future, is therefore deeply interested that scientific international co-operation should go on and be intensified. We are convinced that scientific research in economics, psychology, sociology, etc. if properly conducted and internationally co-ordinated, could alleviate the miseries, which beset the nations today.

T H E H A N D I C A P

"Berthelot, the great chemist, complained that, while in his youth, with four modern languages only at his command he could keep in touch with scientific activity everywhere, he could no longer do so at the dawn of the twentieth century."

Albert Léon Guerard (20)

"In my own field, I have had occasion to see the way in which excellent works written in Danish which might have exerted a deep influence on contemporary linguistic thought had remained practically unknown outside of Scandinavia."

Otto Jespersen (23)

A thousand years ago science and scientific study were confined to a few only. For them Latin served perfectly. But today, thousands of scientific stations in universities, hospitals and factories are established in almost every country and the science workers there converse with each other in their native tongue.

Centuries ago the handicap had been recognized and language learning has been made a major item in education. The result however was not encouraging. It takes apparently a terrific effort to overcome the strength of the mother tongue in the mother country and to learn and memorize thousands of strange words to be used in a strange word order and according to a strange grammar.

Nevertheless the science workers realised the importance of language for their work and they have forced themselves to learn Latin, Greek, English, French, German, etc. in order to benefit by and to keep up scientific co-operation and communication. Now they would have to add a dozen or more languages. There would be no time left for research.

T H E S T R E N G T H O F T H E M O T H E R T O N G U E

"We all know how pitiful meagre is the knowledge of say, French, acquired by intelligent English boys or girls who study this language for four or five years. Yet French and English resemble one another quite closely - how much command of Chinese or Russian would such learners gain in the same time?"

J.A.Lauwerys (19)

"We have failed in our language teaching despite the generous allocation of time, that has often led to the neglect of other vital subjects."

"If neither method nor teacher be to blame, we must look+ to some difficulty inherent in the subject itself..."

H. Jacob (19)

"In the days of Tsarist Russia the speaking of the Lithuanian language was absolutely forbidden and the penalties for breaking this decree were very severe, sometimes death.

Nevertheless, when Lithuania was declared an independent state, some two centuries after the passing of the decree, the language was still spoken by 93% of its inhabitants. The main effect which the decree had, was to preserve the language in its more archaic form, as it had not been free to develop."

Stanley Rundle (15)

Even the penalty of death cannot suppress the irresistible urge in a human being to go on speaking as his mother spoke to him. The mother tongue seems to be an irrepressible force. And there is the fact that a child, learning to speak, will easily acquire any tongue, whereas an adult, already entrenched in his mother tongue, will not. The great linguist Otto Jespersen devoted a great part of his book "Language" to this phenomenon. The mother plays the great rôle in this process. She likes to babble with her child: "And now we are going to wash the little mouth. And now we are going to wash the little nose. And now we are going to wash the little ear. (24). The great language teacher Berlitz has built up a world-wide language-teaching business on exactly the same process, but his pupils were no children any more. Claire Booth-Luce sarcastically commented that women must assume responsibility for the mess which men have made of this world, because women brought up the boys. We call our language the mother tongue, not father tongue. Mothers from all parts of the world emigrated to the United States, to Canada, to South America, to Australia and elsewhere and brought up their children there. Now we have in all these countries and cities large communities which cling to their mother tongue; and the girls in turn become mothers and babble with their children in the mother tongue, and so it goes on and on.

There is only one force which can put up a little resistance against the overwhelming force of the mother tongue: self-preservation. When it is a matter of to live or to starve, people will acquire some bits of another tongue. When people are forced to speak in a foreign language in order to make a living, they will learn it, but they will readily fall back in their mother tongue whenever they can. Actually they can think only in their mother tongue. Just observe a foreigner in a business deal. When it comes to a mathematical calculation, say 347×45 he will start to whisper - in his native tongue.

+ Footnote: when all books of the mimeographed edition were bound, we still found many typing mistakes. Claire corrected them by hand. Sometimes whole words were missing, and Claire put them in, mementos to her patient help.

Lucky the boys and girls who can go to school and learn the language of the country. At home they may babble in some dialect, but the school, the teachers, the signboards, the newspapers, the advertisements everywhere, the constant influence of the literary language of the country will enable them to read and to understand what they read. But millions who have left primary school and become farmers and workers have great difficulties to write a "correct" letter, or to speak "properly" the school language - if their mothers did not speak to them in that language.

But if the influence of a language is not exerted constantly, if it is only restricted to a few hours of language study a week, then the result, in most cases is practically nil. Whatever we study of French, Latin, Greek or any other language in school, aided by the best teachers, the best books, the best methods, we learn only with utmost difficulties and we forget it readily the moment we leave school. A few gifted people will acquire a working knowledge of one or even more foreign tongues, but they are the exceptions.

True enough, science has made great progress even in language teaching. The scientists, grouped in the twenty year old Linguistic Society of America are now leading the world and they have achieved miracles in teaching U.S. soldiers Malay, Chinese, Arabic, Urdu and many more languages. But again it was a MUST. The terrific pressure of war was brought to bear on the men to dig a trench, handle a gun and learn a language. It was self-preservation and this is the only force which can overcome somewhat the irresistible force of the mother tongue.

It's an irresistible "force" like gravitation. It's just there. We have to take it into account. We have to face the fact that the peoples of this world are, as a whole, monolingual. They speak only one tongue, the mother tongue and there are 3000 different mother tongues on this planet.

P R O P O S E D R E M E D I E S

"The fallacy that we can establish one universal speech has long since been exploded. The aim is more modest, to create an instrument of communication, which is highly precise and sufficiently simple and easy to be used as a common auxiliary language beside our mother tongue."
H. Jacob (19)

"There are some 4000 Esperanto books. The League of Nations has published a favourable memorandum (compiled from government reports) on the teaching of Esperanto... The Paris Chamber of Commerce and the London County Council teach Esperanto in their commercial schools... In 1925 the International Telegraphic Union officially recognized Esperanto as a "clear language"... In December 1927, 44 stations were giving regular Esperanto transmissions... Over 50 schemes have appeared for "reformed" Esperanto, "reformed" Ido or some compromise; none of these projects, however, has had any success."

Encyclopaedia Britannica 14th Ed. (25)

Auxiliary international languages have been proposed; more than 300 different very ingenious systems. Enthusiasts in all countries have fought a lonely battle. On many scientific congresses the urgent problem has been raised and committees appointed to study its solution.

But nothing came of it. The committee members realised apparently, that they themselves would have to force themselves to learn and to use either Esperanto, Ido, Novial, Interlingua, Basic English, Speedwords, Interglossa or some other scheme. But even if they would be ready for the sacrifice, and even if they could unanimously agree on one scheme (which they have not), they would not be able to force the other science workers to memorize many thousands of strange words, least of all to use them.

"If it is word economy that you want," answered the inventors, "we have it! Only 2500 words, only 1000, only 850, only 445 words are to be memorized, a task of a few months only!"

The figures may be correct, but they do not tell the whole story. There is more behind it than just the memorizing of a few hundred words.

Let us list the difficulties we face in our own and in foreign languages. Herebelow are a few examples.

1. Different words for the same thing: table, desk, tablet, etc.
2. The same word has different meanings: a dining table and a time table, but literal translation leads to nonsense.
3. The same word used in the same meaning, acquires a different meaning in combination with other words: table top and table land. Again translation leads to nonsense.
4. The same word used in the same meaning, acquires a different meaning even in similar sentences. The cook tabled the soup means put it on the table to be eaten. The senator tabled the bill, means in the United States Congress, put it on the table of the presiding officer to remove it from consideration. But in the British and Australian parliaments it means just the opposite.
5. In all the above cases we dealt with a real entity, a table, of which we can form a clear mental picture. But when it comes to abstract words, like "abstraction", the pitfalls increase by the "square". To abstract means even to steal.
6. The so-called particles, prepositions, postpositions, prefixes, suffixes, etc. etc. are little devils, which defy translation. To put down (on the table) is easy to translate. But to put up (a fight) or to put up with (a fight) bewilders the unfortunate student.

But the most bewildering fact is, that all the above mentioned difficulties are facing the student who wants nothing else than to speak his own mother tongue "correctly".

7. The same difficulties exist in other languages only in other combinations and the harassed student is presented with a super-combination of these difficulties, which make language learning a curse.
8. To this, different grammatical systems are added and
9. Different word order, sentence construction etc. Scholars are of the opinion, that people speaking different languages with different word order etc. have a somewhat different mental "make-up". They actually seem to think differently.
10. As if all this would not be enough, there comes the depressing fact that the meaning of words and the use of them changes incessantly. Some time ago a memorial meant what we call today a memorandum, a piece of writing. Today a memorial means a monument in stone, dedicated to the memory of a person or an event.

The meaning of the same word differs in two countries having the same language. Clever means in America good-natured, obliging. In England it means skilful. The American synonym for the English clever is smart. The English synonym for the American clever is jolly.

Taking all this into account we may now realise the difficulties of a "correct" translation from one language into the other.

"Two languages keep evolving at different rates and possibly different directions, the precarious accuracy of the best translations may not last more than a generation

Albert Léon Guérard (20)

Bridging the language barrier by means of an international language seems to be an almost hopeless beginning. And we know today that even sheer force will be of no avail.

S C I E N C E C O M E S T O T H E R E S C U E

"Mathematical treatises in which all the essential steps of the reasoning and practically all the results are expressed in formulae, can be understood - by mathematicians, of course - all the world over. In his Formulario Matematico, Prof. Giuseppe Peano has totally eliminated language, only a few conventional signs being used. Thus most scientific works are composed at present of two parts - the more important written in some universal code, national languages filling-in the gaps.

Albert Léon Guérard (20)

Where an impass is reached, science can help. And science has already shown a way in different fields, where the language barrier had to be bridged.

I N T E R N A T I O N A L S Y M B O L S

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chemistry H_2SO_4 $\text{H}_2\text{O} \rightleftharpoons \text{H}^+ + \text{OH}^-$ $\text{O}-\text{O}$ $\begin{matrix} \text{H} \\ | \\ \text{H}-\text{C}-\text{H} \\ | \\ \text{H} \end{matrix}$ ⬢

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Wherever international symbols have been agreed upon, the adoption has not presented any difficulty. The foremost reason:

- Everyone could go on talking in the comfortable mother tongue and
- Everyone could go on writing in the comfortable mother tongue and
- Everyone could go on reading in the comfortable mother tongue.

 READING, WRITING, SPEAKING

"Esperanto is still principally a written tongue."

A.L. Guérard (20)

We must realize one important fact. International linguistic communication is almost entirely one of reading and writing. Only a very limited number of people actually travel to another country to converse and exchange their views verbally. Most of international thought is transmitted by reading of books and articles of foreign authors, simply because most people have to stay in their home country.

A similar consideration applies to science. International communication of thoughts on scientific matters across the frontiers, is chiefly done by reading and to a small extent by writing.

The part of speaking on international scientific congresses is almost negligible in relation to the whole of scientific communication. Everyone who has experienced hectic congress days learns to appreciate the calm and composed exchange of letters and reports with fellow scientists, who live far away. Besides, only a few people can afford to travel to congresses. Almost all science workers stay at home and work there. They read books and articles of foreign scientists and occasionally write to them. Some science workers can read one or two foreign languages, but are not often able to write in them, least of all to speak them.

A great part of the population can read the newspaper but can't write a "correct" letter, or speak "correctly".

If we arrange these activities according to the degree of difficulty, we find that

Reading a foreign language is the easiest of all.

Writing is much more difficult.

Speaking, which includes hearing, presents the greatest difficulty.

But the two activities with which international communication of thought is carried out, are almost entirely reading and writing only.


Both these activities could be carried out with international symbols.


At once the curse of language learning is removed - the memorizing of thousands of strange sounds, representing the vocabulary.

The use of international symbols is an accomplished fact in mathematics and partially also in other sciences.

It is an accomplished fact in music, the international language of human emotion.

It is an accomplished fact where the language barrier had to be bridged to save human lives, on the sea lanes and the highroads.

Here an unexpected advantage of spatial symbols comes to the fore. The meaning is glanced and grasped by the mind almost immediately by this sign , whereas a sign CURVE or KROMME (which is Dutch) may lead a foreigner straight into a fatal accident.

The space-symbol  is nearer to the structure of the real world, whereas the writing CURVE or KROMME is only composed of noise symbols and has to be "translated" into the real meaning. This "translation" is carried out at different speeds in a "quick" mind and a "slow" mind. The difference may amount to the difference of life or death of the speeding motorist.

Yes, international symbols have proved its worth, time and again, but - for ordinary language - the idea still seems an impossibility.

T H E I M P O S S I B L E M A Y B E P O S S I B L E

"Proposals for an international language with any prospect of success must emerge from the experience of ordinary men and women, like the Hindu number system which revolutionized mathematics after the eclipse of Alexandrian culture."

F. Bodmer and L. Hogben (5)

Our numerals 1, 2, 3 etc. are not "Arabic" but the initial letters of the Sanskrit names for the digits, as used by ordinary Hindu men and women. A symbol writing, with any prospect of success, must emerge from the experience of ordinary men and women. The symbols must represent things of our world. A symbol writing must therefore follow the trend of the picture writing of the past and of the scribbling of children. It must depict things.

Someone may point to the cumbersome, complicated and very difficult (for the foreigner) picture writing of the Chinese. Chinese newspapers use 7000 to 8000 different characters. Multiply this figure with the types of different size! Yet, the paper appears punctually at the breakfast table. Chinese typewriters use 1500 - 2500 characters. Yet, one pressing of the key types a whole word. Nevertheless, Chinese characters are overloaded with complicated forms and irregularities and there are far too many.

But a modern, simplified picture writing, such as proposed in this book, might perhaps be possible. A system which works with about 100 to 200 symbol elements only, of which most are already known and internationally used by ordinary men and women, might perhaps do the job.

This book tries to prove that it is possible to express with 100 to 200 symbol elements many thousands of words; that the symbols are clear and non-ambiguous; that the reading is easier than alphabetical reading and that it is possible to type the symbols with an adjusted typewriter of ordinary size.

Let it be understood. Semantography could even be used for poetry like Chinese poems, (praised by all, who can read them, as the world's finest). But, of course, nothing of the sort is contemplated. Semantography should only be a practical tool for science, industry, commerce traffic, etc. It should only be an auxiliary writing, in no way impeding any national language.

Scientific reports are usually simple and clear statements. Newspaper-men can also use simple and factual words. Industrial reports too, are simple and clear statements. Anyone who has read thousands of patent specifications knows well, that a few hundred words are used over and over again. This is what we call descriptive language. Foreigners use those few hundred words to get along splendidly. They come and go, get and give, take, keep, do, make, have, be, say and see. This is one of the secrets of the ingenious Basic English of Ogden, who has proved to the world that extreme word economy is possible.

Mathematical symbols are used to form clear statements. The same applies to chemical symbols. Why should we not be able to use a few symbols for clear statements in other fields? If we are in doubt, we have a time-honoured international symbol to say so: the question mark ?.

Symbol Writing, if used to make simple and clear statements, could even be helpful to remove a curse on language: the juggling with words.

SEMANTOGRAPHY AND THE STRUCTURE OF OUR UNIVERSE.

"Good language alone will not save mankind. But seeing the things behind the names will help us to understand the structure of the world we live in."

Stuart Chase (26)

Words are noises produced by our larynx, lips, tongue, etc. It took mankind hundreds of thousands of years to evolve language and then tens of thousands of years to invent writing. The alphabet A B C is a system of noise symbols. These symbols are arbitrary. They could be changed into the Greek symbols α β γ for similar noises. These symbols have no direct relation to the real noise-making (speech) with the possible exception of the letter o, which is a space representation of our mouth opened to make that noise o.

As said before, the great difference between phonetic writing and this symbol writing is, that here every symbol indicates geometrically a real thing (with the exception of already used international arbitrary symbols).

Leibnitz the mathematician thought 300 years ago, that this should be possible by the employment of "small figures in the place of words, which would represent visible things by their lines and the invisible by the visible, which accompany them" (7)

Thus every new symbol will be in itself a space representation - at least partially and only on the 2-dimensional writing surface.

Scholars of picture writing (Chinese) claim the wonderful easiness in reading, with which things and ideas are conveyed directly to the mind. Basil Hall Chamberlain was even convinced that ideographic writing will achieve final victory over phonetic writing.

Leibnitz (page 180) believed that it should even be possible to build up the representation of complex ideas, by the combination of simple elementary ideas.

This book tries to prove that this is feasible; that those almost self-explanatory symbols of semantography could be used to build up complex meanings, just like chemical formulae are build up.

And here, a new and completely unexpected vista opens up.

THE CHEMISTRY OF WORDS

"Chemical formulae contain at the present day such detailed information, concerning the relationships of the substances symbolized, that one might conceive the possibility of writing a chemical paper with formulae alone...

We perceive here the realisation of the ideal of a purely ideographic language, which can be read by the specialist without his requiring to translate it into the words of any particular form of speech...

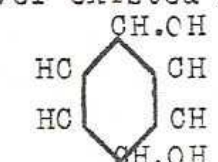
These well known facts show that the problem of an international language has already been partly solved by science."

Wilhelm Ostwald (27)

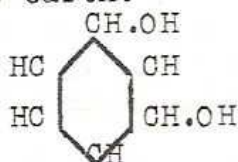
Chemical symbols consist of alphabetical symbols, which however represent no sound, but the chemical elements in question. To aid the memory, the letters have been chosen to stand for the names of the elements: H = Hydrogen, O = Oxygen, C = Carbon, etc. Mathematical numbers are also introduced to indicate the amount of atoms related to each other.

Today efforts are under way, to make chemical symbols "truer" in meaning, by adding the mass number, the atomic number, etc.

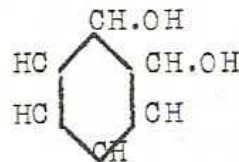
Meanwhile chemical formulas as they are handled today, have worked wonders and especially their spatial form has been the direct cause for the search and the discovery of new related chemicals and materials, which probably have never existed on this earth.



Hydroquinone



Resorcinol



Pyrocatechol

These 3 chemicals have the same content of Carbon, Hydrogen and Oxygen, even the same groups and the same formula $C_6H_4(OH)_2$, but their structural formulas are different and that means; their properties differ. They are different things altogether.

What is the magic of the chemical formula?

It reveals part of the hidden structure of a thing.

SALT is just a word, but NaCl reveals the hidden structure and shows the inherent danger, an inflammable metal Natrium (Sodium) and a poisonous Gas Chlorine.

To use a metaphor - there are words in all languages which look innocent enough, yet they contain inherent fire and poison. The second world war has been unleashed by words, and - unless we find some means to clarify the meaning of those dangerous words, to show to the people that they are very vague in meaning, some even meaningless, we can be sure that the next world war will again start with similar dangerous words.

Seen from this angle, the aim of semantography is very ambitious: to find new and "truer" symbols for words. If this could be achieved, it may mean a stop to the present charlatanism of befogging people with words.

This book tries to prove that it is possible to build up the meaning of words, truer than before - but there is only one way to prove it: you, dear reader, ~~you~~ must co-operate. You must work your way through page after page, until you grasped the basical idea and until all symbols appear to you natural and meaning-ful. Then we may enter the chapters on semantics and learn how inflammable words like "Government of the people", "Democracy", word poisons like "Master race", word explosives like "Socialism, Communism" etc. can be written like a chemical formula, which would not only make endless debates and fights look silly, but which would actually prove creative of future peace and sanity.

As said before - there is only one way to prove this - hard work. It can't be said in a few words. If you glance through the pages, read a few lines here and there, and then reject it, you may swell the ranks of all those who have rejected the steam engine, the vaccination, anæsthetics, antiseptics, and so on, in an endless line.

Remember the umbrella! It was first considered utterly ridiculous.

D E S C R I P T I V E L A N G U A G E

"From its beginning in 1662, the Royal Society adopted English. According to Spratt, the first historian of the Society, its statutes demanded from its members a close, naked, natural way of speaking... preferring the language of the artisans, countrymen, and merchants before that of wits and scholars."

F. Bodmer and L. Hogben (5)

As said before, patent specifications, industrial informations, medical statements etc. are written in a short, descriptive, matter-of-fact language, without highsounding and vague words. A few hundred words are used over and over again.

Let us make a few statements, as often occurring in science, medicine, industry etc. and let's contemplate if they could be written in some sort of mathematical statement.

KMnO_4 soluble in H_2O .

100 g H_2O will dissolve 169 g KNO_3 at 80°C .

Speed: 450 km per hour. Direction: NNW

Fuse melts at electric current of 15 Amp.

Skin reddened, pulse 85, Temperature 39.4° , pupils greatly enlarged, patient feels weak, refuses water and food.

Import duty on iron ore suspended.

People believe in another life after death.

All these statements are simple. Why should we not be able to write them in some sort of mathematical statement, using symbols, valid in any language?

WHAT HAVE WE ALREADY TO OPERATE WITH

"Men of science, more than others, have at their finger tips an international vocabulary, which is already in existence; and a biologist who looks forward to a health-conscious future cannot fail to recognize how popularization of new health standards is daily adding to the stock-in-trade of internationally current words in daily use."

"There is already an international vocabulary of medicine, of agriculture, of horticulture, of navigation, of mensuration, of astronomy, of chemical manufacture, of engineering, of cartography and of mathematics... the number of such terms in everyday speech has increased by leaps and bounds since the time of Zamenhof..."

Lancelot Hogben (2)

We have already a battery of international symbols (see page 57). We have furthermore a battery of many international words, like radio, hotel, telegraph, generator, motor, etc. etc. Although it is quite simple to invent a good symbol for all of these words (and for many, such symbols have been invented) scientists and technicians may go on using such words in their reports written in semantography. Our typewriter carries the alphabet too.

Scientists have furthermore a battery of internationally acknowledged symbols and Latin names in Medicine, Botany, Zoology, etc. In Medicine, the amount of organs, nerves, etc. is limited and these Latin names are the common stock-in-trade of every doctor.

In Botany and Zoology the scientists will have to use mathematics sooner or later. 470,000 different insects have already been classified and named in Latin. But there are all in all about 10,000,000 insect species, of which only 5% have been named (28)

As said before, internationally acknowledged names and terms could be used in reports written in semantography. And doctors and scientists may go on inventing new terms to their hearts desire. As usual, they explain their new terms in simple words in a glossary. They may explain them in simple symbols.

HOW IT WOULD WORK

"It is very difficult for the layman not to be led away by considerations...which are really quite irrelevant. Many protagonists of one scheme or another (for an international language), include among the advantages, advantages accruing from the solution of the problem itself, and even those accruing from scientific and political advancement in general."

Stanley Rundle (15)

Having^{been} warned by the above quotation, we may now soberly contemplate what semantography could mean to the progress of science.

Let us imagine that the universities have agreed to cooperate and have established a department, which issues sheets in semantography, typewritten and duplicated in universities with lesser funds and nicely printed in universities with large endowments.

All sheets contain an informative title and a short report about the research carried out and a summary of the results obtained. All sheets are of equal size for filing purposes and classified according to the international Dewey system, which is actually some sort of an international language, based on a similar classification system as Bishop Wilkins' philosophical language (see page 46). The Dewey system, operating with numbers, is already in use in almost all public and private libraries the world over. (see page 40) This system would insure quick filing and quick tracing.

All universities would exchange their sheets on a free-of-charge basis; that means that each university would get one sheet of all reports of all other universities and vice versa. Patent specifications are today exchanged the world over by patent offices of all countries in a similar way.

But, although each university would get only one sheet gratis, it may order 1000 or 5000 copies from a special sheet for distribution among the science workers and students. In fact, anyone, professors and students, doctors and

engineers, factories and hospitals may order sheets. The leading universities in every country may set up a special distribution center. An engineer may order all special sheets of all universities and research institutes, pertaining to diesel engines, an agriculturist may order all sheets pertaining to wheat growing, a teacher may order all sheets pertaining to semantics, a doctor may be interested to have all sheets pertaining to malaria, etc.

Would this be expensive? The answer is No! A world-wide distribution, which assures a large edition, would make the price as low as the cost price of the paper. Besides, the great universities and scientific foundations have the progress of science as well as scientific co-operation and communication as their chief aim. They may even distribute these sheets gratis. Today a crime story (500 pages) sells for a few cents. A scientific book (500 pages) cost ten times as much or more. Chief factor is the difference in the price of a small or large edition.

In the following chapter all the advantages are listed which would accrue from the distribution of research reports in semantography.

RESEARCH REPORTS IN SEMANTOGRAPHY
COULD BE A BLESSING FOR THE SCIENCE WORKER

"Men of science...are acutely aware that the Babel of tongues is a social problem of the first magnitude."

Lancelot Hogben (2)

"The absence of a common medium of communication...is the most formidable obstacle to the progress of international science."

Charles K. Ogden (8)

1. Sheets written in semantography would be short, would inform the reader in a minute, just by reading the title and the summary, whether the content is of interest to him or not.
2. Every science worker would read them in his or her mother tongue. A special course and textbook may enable every worker to acquire the knowledge of the ~~see~~ symbols and how to operate them.
3. Those sheets may cost little or even be available gratis.
4. Semantography offers space economy. One character, not larger than one or two letters stands for a whole word often composed of 10 letters or even more, like ⚡ for electricity. A report in Semantography may take up half the space of the same report written in phonetic writing.

(66)

5. At present, scientific books, periodicals and reports have a small circle of readers, limited by language and limited by the purse. Scientific publishing is expensive. Most of the small-earning doctors, engineers, factories and hospitals can't afford to subscribe to many periodicals and books in their own language, even less in a foreign one.

With semantography in operation the change may be dramatic. A sheet about a new malaria treatment costs almost nothing and is readable by the doctor in Peru, in Greece, in the Philippines or elsewhere. They can read it in their respective mother tongues and more than that, they could correspond with each other - just like two doctors in China, who could not understand each other in speech, yet can write to each other in their ideographic script. Chinese writing is highly complicated. Semantographic writing is very simple by comparison. Just compare the characters on the pages 4 - 6.

Sheets in semantography would have a world-wide readership and may start a world-wide scientific correspondence.

6. Fiction books are bought for amusement. Scientific books are a dire necessity for the science worker. They are his most important tools. Every science worker who is condemned to work in a forgotten place, suffers foremost from being cut off from scientific advance. Many of them may be willing to go hungry, in order to be able to subscribe to a special periodical or a new text book, printed in their language, but they are mostly unable to subscribe to foreign literature. They have not the money and they can't read it.

With sheets in semantography, they are at once in direct contact with all the universities the world over and with all the research workers in the same field. More than that, they can get in touch directly with all universities, scholars, publishing firms and any organisation, including business firms by writing a letter in semantography.

A Singhalese doctor could correspond in "Singhalese" with a doctor in South Africa, who could read the letter and answer in "Africans".

7. Science workers in small countries are often unable to reach their own university and to have their researches recorded in their native language. The history of science is littered with tragedies. Scientists have fought hard and futile struggles for recognition, died in obscurity and embitterment, only to be recognized decades after death for their genius.

With a semantography distribution center established, the situation changes radically. The world distribution center has a world-wide readership. More than that, it has an assured number of permanent subscribers, just like the "book-of-the-month club". The center knows exactly that there are 98,758 subscribers for the class MALARIA and 480,746 subscribers for the general class DISEASES TRANSFERRED BY INSECTS. If a doctor in the Sudan sends in a

short report of about 20 - 40 lines about the result of his research, the center knows exactly that 480,746 subscribers would take it. The report of that doctor in the Sudan would reach all doctors the world over, interested in that special field.

8. But even if the world distribution center exercises some discrimination and declines to print some research reports for which the subscriber may perhaps not be willing to pay, no harm is done. The doctor may then make a private report, if he thinks it worthwhile. He can type the sheet himself and have it duplicated, after submitting form and content to the National Semantography Center, which would see that the size, classification and "orthography" is correct. Or the center may undertake the printing at the doctor's expense. His sheet, marked as a private report, would then be inclosed free of charge in the bundle of all the other sheets which are monthly sent to all subscribers. These will be glad to get such sheets free of charge and, after a glance to the title, may be able to decide immediately whether the subject is of interest to them or not. If not, into the file it goes! If yes, the 40 lines are quickly read and a correspondence may be started which could be of far reaching consequences for that forgotten doctor in the Sudan.
9. Thanks to the Dewey classification and filing system and thanks to the fact, that the result of all researches of all universities and private scientists would be available within a few months to all scientists the world over, it would be possible for a science worker to find out quickly the exact stand of the latest research in his special field. If he has not the latest sheets and lives far away from any public library, he may write to the National or to the International Distribution Center, and he may get complete information and all the sheets in question. Thus futile work on a problem, already solved by somebody else, could be avoided, and new work can start where the others have left off. The tragedies are innumerable, in which scientists have worked for years on a problem, only to be shocked profoundly by the crushing discovery of an article published in a scientific magazine of a far away country, anticipating all results of a hard life's work.

All the above listed considerations and some more, may be summed up:

To subscribe to all sheets covering a particular field of science would be considered by a science worker as a dire necessity, as an absolute MUST, as something more important than any amenity of life.

And he will gladly learn to read semantography in his mother tongue, the more when he finds out, how simple it really is.

(68)

In the foregoing paragraphs we have contemplated the working of a world-wide distribution of research sheets written in semantography. Now we may be allowed to let our imagination go and contemplate what progress in science, fostered by such international co-operation may mean to each of us.

We know what the medical men have done in fighting epidemics and bringing health and sanity to untold millions. No doubt, material progress and many amenities of life would be brought to people who never dreamt of ever attaining such luxuries. But our expectations may go further. Researches in psychology, psychiatry, semantics, etc. may reach a point, where the scientists would have learned to deal with mass hysteria, mass delusion, and nation-wide "brain-diseases"

in much the same way, as they have been able to wipe out bubonic plague, yellow fever and cholera. The preservation of peace within the family, within the nation and within the family of nations would become a routine work just as vaccination and inoculation is today. We may, after all, dwell in peace and any martial incidence may be properly dealt with, just as appendicitis has been made harmless.

Meanwhile the agriculturists would have co-ordinated their efforts in raising crops, better and bigger than ever before. They may in the end produce food in such abundance that no one would go hungry, and everyone could afford it. All bellies filled, means contentment to the owners of the bellies and this too, is a major factor regarding the preservation of peace. The engineers in turn could co-ordinate their efforts to bring the amenities of life to everyone.

This is a dream vision, you may say. But it has every possibility of becoming a practical reality. Just look what science has already done. Don't argue that the same chemical which is used as explosive to excavate earth for an irrigation dam, is also used for the destruction of human lives. We are only at the beginning. We will overcome that too. Scientific research and international co-operation is only about 190 years old, a mere fleeting second in the history of man. You, dear reader, may be healthy and enjoy life just on account of science. A hundred years back, many millions like you, died hopelessly of an inflamed appendix. Today they are saved.

International scientific co-operation is the magic key to a happier future. The Babel of languages and the difficulties to acquire a foreign tongue are the handicap.

Semantography may help to remove this handicap.

There is one more advantage. Everyone who had the opportunity to correspond with people in distant lands on scientific and literary matters, knows that such correspondence helps to cement a friendship which overcomes all prejudices of nationality, creed, race and language.

WOULD A SYMBOL WRITING WORK ?

"In China the written and not the spoken language is the unifying and political factor."

C.H.Becker (29)

"European alphabetical writing...has a mere phonetic value, whereas the Chinese character reproduces a direct image and idea."

Richard Wilhelm (30)

"Like nature, the Chinese words are alive and plastic."

Ernest Fenollosa (31)

"There is a peculiar fascination in the study of these characters when once they are known."

Chester Holcombe (32)

"Ideographic writing will surely achieve the final victory over phonetic writing."

Basil Hall Chamberlain (9)

"The Chinese script has remained in principle ideographic...but the fact that...pronunciation changed...after the penetration into China of foreign tribes...by no means rendered the script unintelligible. For centuries, on the contrary, it has led an existence practically independent of the spoken language and provided a living record of the progress of civilisation. This is the main reason why nothing once acquired by Chinese culture ever disappears entirely, and why its tradition has survived all changes in race and language..."

The employment of ideographs in Chinese script, so frequently described as wearisome and prejudicial to progress, has thus had a good deal to do with the persistence of Chinese civilisation and the balance maintained throughout Chinese history. The steady development of mathematics, with such remarkable effect on the whole of modern science, may possibly be ascribed to similar causes. Mathematical signs are independent of pronunciation, just as Chinese characters are. It is easy to understand therefore why it was precisely Leibnitz, the mathematician, who saw in Chinese script the best universal medium for scientific thought."

Robert Wilhelm (30)

Would a symbol writing work? Why, it works already beautifully in mathematics and in many sciences. It works in industry, commerce and traffic. And moreover; it has been used for thousands of years down to our day and it helped to bring about the largest nation on earth, the Chinese, who claim one of the oldest cultures.

Here are a few facts about the Chinese. They use not an alphabetical writing, but a symbol writing. It dates back to bygone times. The "Chinese nation" is actually a mixture of many tribes, peoples and races. The country has been invaded hundreds of time. Usually the conqueror impresses upon the subjugated people his language and his culture. In China it was just the other way round. The conquering races were absorbed in the end, they became Chinese. To-day the great mixture of many peoples comprises one quarter of the earth's population, about 450,000,000 of people, more than all the nations of Europe.

They speak in many tongues. The man from Peking does not understand the man from Canton, even less the man of Tibet. There are great differences in bodily features, in culture and outlook between the people in the North and South, East and West. Yet, all those different peoples feel themselves as members of one great community. Why?

Eminent scholars say that the unifying factor is their ideographic writing. People from different parts of East Asia cannot understand each other in speech. Yet, they can write to each other and they can read the classics, the writings of the great scholars of ancient times. They read the same book in different languages.

Centuries ago, the government tried to introduce a phonetic writing. It always proved a failure. The peoples realised the great advantage of ideographic writing, the possibility of bridging the languages (33).

Moreover, scholars who have learned to read Chinese characters are enthusiastic about the vividness of the writing and the easiness in reading. Pictographs are symbolized pictures of real things. The word MAN, as it stands is only a sound, which we have to translate in our brain into the mental picture of a man. However the pictograph 人 suggests immediately without mental translation, a real man.

Anyone who comes into China as a scholar, a merchant or a conqueror learns to read, sooner or later, at least a few of their written characters. But he learns to read them in his own mother tongue. The pictograph 人 does not mean nji to him (which is the word in the Shanghai dialect). For him it means a man and he uses the word of his own mother tongue to pronounce the character. So the Chinese script slowly becomes familiar to him through the familiarity of his own language. If a whole tribe settled down among the Chinese, within a few generations the intellectuals among them, the wise men, the leaders became acquainted with the great books of Chinese literature through the medium of their own tongue. Chinese thought,

Chinese wisdom, Chinese writing found slowly their way into their thinking, their outlook, their speech. In the end, the invaders became absorbed, became Chinese themselves, only to absorb in turn the next invader.

Famine, plagues, floods and wars have not spared China, as they have not spared Europe, yet the peoples remained always an indivisible whole, bound by a common culture, a common wisdom, a common literature, expressed in a common writing, readable in all the different languages of China.

This common writing, which uses a common word order and a common grammar has greatly influenced the languages in China, making them more and more familiar, except for the pronunciation. The Chinese ideographic writing has been a main factor in breaking down the greatest differences in the various languages.

Always engaged in a struggle against famine, not aided by governments, which failed to introduce common school education, a great part of the Chinese people is illiterate. Yet, the authority of those who can read is so respected, that those ideographic characters exercised their spell also over the illiterate. Today with the introduction of school education, at least in the most advanced provinces, the children learn to read with an easiness which surprises the foreigner.

Most Chinese characters are very complicated. The original picture of the real things is almost entirely obliterated. Poets and philosophers have added queer symbols for queer abstract entities. Compared with the 26 letters of the Western alphabet, the thousands of Chinese characters seem an almost unsurmountable difficulty to the Westerner. He is surprised to see great newspapers printed daily with the many thousands of symbols of different height and shape. He marvels at the amount of periodicals and magazines which the street vendors have for sale. He is amused about the many thousands of street libraries where children sit around and read great fairy tales after paying a small coin. He looks into the factories, into the offices, into the banks, into the schools and universities and he sees a great nation speaking in different tongues in their great empire, yet handling an antiquated and complicated symbol writing with an easiness and fluency which is the greatest surprise to anyone who comes to China. And he realises that these 450,000,000 people are bound for a great future.

Yes, symbol writing is not only a possibility, it is a reality and it has been one for thousands of years. We Western people, who think it to be "backward," simply do not realise its advantages and its great unifying power in bringing people of different races, habits and languages together.

Chinese typewriters contain 1500 to 2500 symbols. Yet, one pressing of a key types a whole word. Semantography works mainly with about 100 to 200 symbols, which recur again and again in combination.

If Chinese writing in all its complexity and with all its difficulties has brought about the unification of many people, in spite of all the terrible disasters which have befallen China, we have all reason to hope for great beneficial results from a simple and modern symbol writing.

Let us end this chapter with a repetition of a citation from one of the greatest scholars on East Asiatic culture and language, Sir Basil Hall Chamberlain:

(9)

"Ideographic writing apparently possesses some inherent strength that makes it tend to triumph over (without entirely supplanting) phonetic writing, whenever the two are brought into competition in the same area.

All the countries under Chinese influence exemplify this little known fact in a striking manner.

In Europe such competition has scarcely taken place, except in the case of the symbols for the numbers and a few other ideas; but there, too, the general law has asserted itself.

Egypt, too, retained its hieroglyphs to the end...

Doubtless an ideographic system of writing is infinitely more cumbrous as a whole than its rival; but it is easier in each particular case.

Hence its victory.

Ideographic writing will surely achieve the final victory over phonetic writing."

WHAT WILL HAPPEN TO THIS IDEA, IF NO ONE TAKES A LEAD.

"Before 1855, ships belonging to the same nation were often unable to converse owing to the fact that different codes were in use on board of them. The confusion of tongues at the tower of Babel was insignificant in comparison with that which hitherto prevailed in transmitting messages at sea."

Chambers Journal 1891 (12)

This book may find its way on the desks of some scientists and other people interested in a new idea. Some newspapermen may write a story or two about it, friendly or utterly sarcastic. Some examples might be given to show how simple or how silly it looks. The average reader will forget it, the moment he turns the page.

Later on, government officials, industrialists, businessmen, motorists, etc. etc. may invent some symbols for use in their own country. The symbols would be different for the same meaning in different countries.

Meanwhile some dreamers, laymen and professors, might have taken up the idea. At different times in different countries books might appear about a New Symbol Writing, Reformed International Symbols, Symbola, Inter-symbols, Symbolinternal or Symbal. In the end there might be different symbol writing systems in different countries. Men would stand up and demand a unification and stardisation for the whole world - but there would be "considerations" as thousands of sign posts would have to be torn down or altered, the habits of millions would have to be changed... Congress committees would be set up to work out proposals, to consider the merits of existing systems.....etc.etc.ad infinitum.

If you think that this may be an exaggeration just take a look at some highway signs in different countries. The following are just a few examples. Some may be quite all right in one country, but a foreign motorist who has learned a different sign in his country, may endanger his life and the lives of other motorists. Some signs are ambiguous, some others depend on the knowledge of the native tongue in which they are written. Disastrous mistakes may occur in bad weather with low visibility or when racing at high speed. These symbols are a matter of life or death.

THE BABEL OF HIGHWAY SIGNS

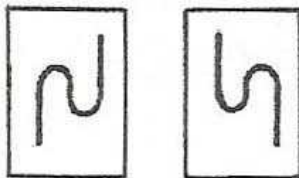
A potential source of accidents.

The BEND sign, international, but ambiguous and dangerous (34)



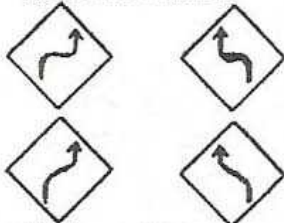
This sign has been adopted in many countries, especially in Europe. According to the outline it means obviously a double bend, indicating first a turn to the right and afterwards a turn to the left.

It may mean such a double bend, but - it may mean just the contrary too: first a turn to the left and afterwards to the right, in direct contradiction with the outline. The motorist from America (see below) who follows the clear outline is "in" for a headlong crash.



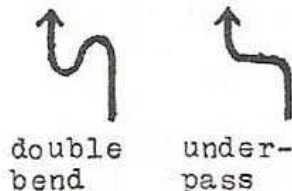
Among other European countries, the above shown BEND sign is used also in Great Britain. But there its ambiguity has been recognized and two other signs have been suggested (see left) which clearly indicate a double bend in the one or the other direction. (35)

suggested alterations



U.S. signs

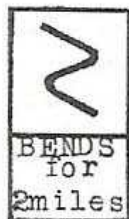
In Texas and other American states the above shown ambiguous BEND sign is not used and other signs have been adopted which are more to the point. They show clearly the direction of the double bend and they show too, whether the turn is a sharp right angle or a smooth angular one. (36) (37)



double bend

underpass

In some other countries, however (28), the signs (see left) have been adopted, of which the first means a double bend, but the second sign means something completely different - an underpass. This sign resembles closely the above shown American signs. Mistakes must occur.



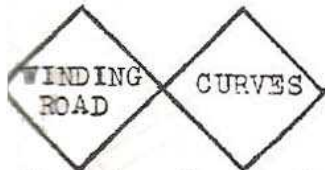
Britain



Texas

However the ambiguity of the BEND sign in question goes even further. It may not only mean one double bend. It may mean many double bends or many single bends in succession.

In Texas a special sign has been adopted which even shows in what direction the first bend goes; to the right (as shown in the picture) or to the left.

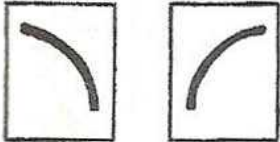


U.S. sign Australia



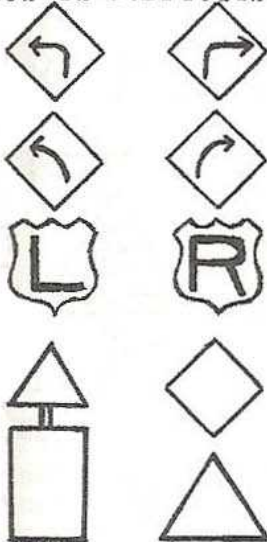
However, in other American states, a sign in the language of the country WINDING ROAD has been adopted. In Australia it reads CURVES. Language signs present difficulties to the foreigner and are liable to be misunderstood in bad weather with low visibility.

But the ambiguity of that international BEND sign is not yet exhausted. It may not even mean a double bend although the line indicates this clearly. It stands also for a single bend only and again the motorist is left to guesswork whether the bend will come to the right or to the left.



Alterations have therefore been suggested in Great Britain to indicate clearly a single bend, whether to the right or to the left.

suggested alteration in G. Britain



In Texas and other American states, the single bend signs have been adopted, which are shown at the left. The Texas signs indicate even whether the bend is at a sharp right angle either to the left or right, or whether the bend is at a smoother angle.

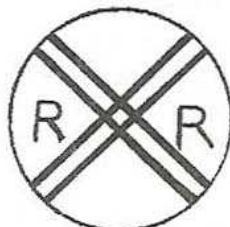
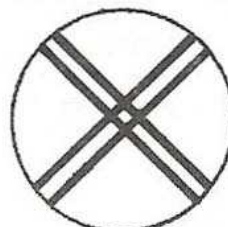
In Texas a turn marker with the alphabetical letters L and R (see left) precedes the arrow signs (shown above). However alphabetical signs are not advisable.

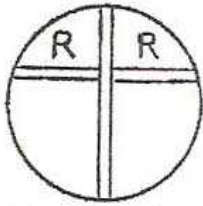
To heighten possible mistakes, the boards on which all these BEND signs are painted have different shapes in different countries, be it a triangle, a rectangle, a square or a diamond. These different shapes have usually also different meanings, different in different countries, for instance a circle indicates a mandatory sign in some countries, whereas in other countries it has not this meaning.

We must not forget that all these signs are usually glanced at from the corner of the eye when racing along with great speed, and as often as not, there is rain, fog, snowstorm, or just darkness, which hinders visibility.

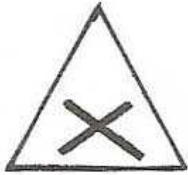
CROSSING sign varieties.

Here is a veritable death-trap ambiguity

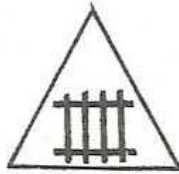
Railroad Crossing
(U.S.A.) (37)No stopping allowed!
Drive on! (Europe) (38)



Railroad Crossing
(28)



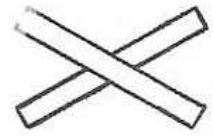
Crossing Internat.
(34)



Railrd. Cross. guarded
internat. (34)



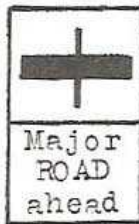
Railrd. Cross. level
internat. (34)



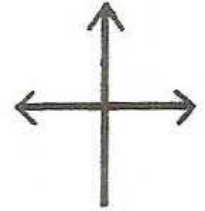
Railroad Crossing
internat.



Crossing signs G. Britain
(35)



in Texas (37)

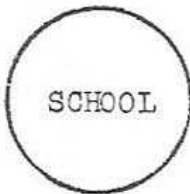


Other crossing signs (28)

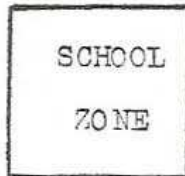
SCHOOL signs, dangerous in their variety (Signs in other languages than Teutonic are not shown here)



G. Britain
(35)



Australia
(39)



Texas
(37)



Netherland
(38)

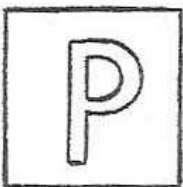


Germany
(40)



Italy
(41)

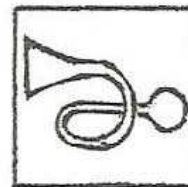
YES OR NO AMBIGUITY



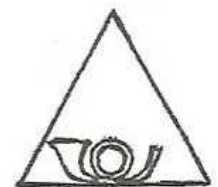
PARKING
international in Europe
(34)



NO HOOTING
correct
Austria (42)



NO HOOTING
contradictory; South Africa (43)



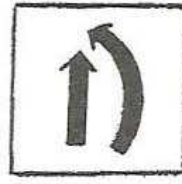
STOP WHEN ENCOUNTERING A MAIL BUS (post-horn) Italy (41)



T-JUNCTION
not a cross road
U.S. (36)



CROSS ROAD
but NO RIGHT or LEFT TURN
Italy (41)



NO OVERTAKING
oblique stroke missing
South Africa (43)

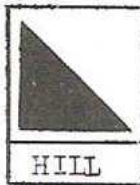


NO OVERTAKING
stroke vertical instead of oblique
Italy (41)

UP OR DOWN THE HILL OR WHAT ELSE ?



U.S.
(36)
up or down?



G.Britain



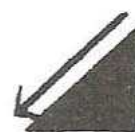
Ascent
left



Descent
right



Ascent
right



Descent
left

These signs (28) show correctly whether ascent or descent, to right or left.



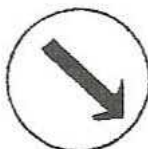
School



Hospital
Germany(40)



Descent
to right
S.Africa
(43)



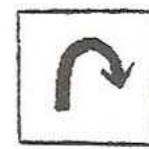
Keep to this
side of road
Netherland
(38)



Don't
stop!
internat.
(38)



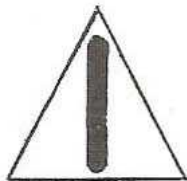
No right
turn
Italy(41)



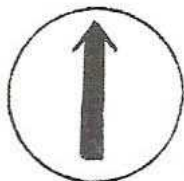
Hairpin-
bend to
right

DANGEROUS SIMILARITY

SAME MEANING, DIFFERENT SIGNS



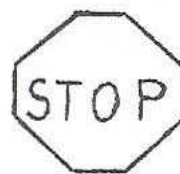
Danger spot
The triangle, appearing so often, are not sufficient to avoid mistakes in bad visibility
International



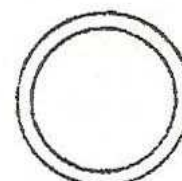
Straight on



Stop sign
G.Britain
(35)



Stop sign
Texas
(37)



Stop sign
No entry
Internat.(40)

Most of the examples shown above are geometrical signs. But there is a host of signs in every country in the native tongue only, like:

- | | | |
|---------------|-----------|-----------------------|
| No left turn | Detour | Bad corner |
| One way road | Dip | Junction road closed |
| Men working | Ford | Danger thru highway |
| Low clearance | Crest | School children ahead |
| Narrow bridge | Slow | One way bridge |
| Slippery road | Fresh oil | Proceed slowly |

and many more. For a foreign motorist they could just as well have been written in Greek.

One should believe that in a vast territory like the United States, where millions of motorcars are constantly on the highroads, all signs are of uniform design. But this is not the case. There is a Manual of Uniform Traffic Control Devices for Street and Highways, issued by the American Association of State Highway Officials Washington, and approved as an American Standard by the American Standard Association (36). On page 2 we find the following statement:

"The committee deplors the independent procedure of certain jurisdiction in the solution of shapes and color combination at variance with this standard, and hopes the importance of complete uniformity will be increasingly recognized."

Mind you, this refers to the United States, the country of the motorcar. Think now, what resistance would have to be overcome to bring all countries to agree on standardized international symbols for all highroads of the world, and what expenditures would have to be made to have the many millions of signs altered.

The fact, that different countries have adopted different signs, may be explained in different ways. But three factors have, no doubt, played a great rôle:

- (1) Signs in the native language, instead of in geometrical symbols. Other countries adopted signs in the respective native tongues.
- (2) Arbitrariness of some geometrical signs, which spatially conveyed no meaning, and which officials in different countries tried to "improve" by adopting other signs, again arbitrary.
- (3) Absence of an international symbol writing.

Now this matter of highway signs is a matter of life and death to millions of motorists. Unification is of the utmost importance. But the muddle is already too great. There are too many national systems, differing in many signs. Every country would be reluctant to make a change; to erect new signs; "to give in" to an international authority; to make such great expenditures.

If however - some forty years ago - a few motorcar manufacturers would have been farsighted enough, to work out a complete system of all necessary warning signs, all geometrical only, all as true to nature as possible; avoiding arbitrariness. to which signs the native words would have been added underneath - then the countries would have had already a system to draw from, instead of inventing signs, different for different countries.

The history of international co-operation shows clearly that it was achieved by one important country taking a lead (by a few farsighted men in this country). When this step was taken at a time, when national systems in different countries have not yet developed, it was the simplest way for the other countries to follow the one important country and to adopt its system for mutual understanding.

This idea of an international symbol writing may go to the dogs, if no one takes a lead - right now - not after the idea has been taken up by people in different countries and has been split in different national systems.

I N T E R N A T I O N A L C O - O P E R A T I O N

"The word "international" was only invented by Jeremy Bentham in 1780 - nowadays we have come to the point of needing an international language."

Otto Jespersen (23)

"Now there are no fewer than 670 known organisations which deal with international matters."

Herbert N. Shanton (44)

The pessimist may say that international co-operation does not exist. The optimist however may point out a few examples of international co-operation which live, which are healthy and strong, which are accepted by all countries, simply because it is the most practical thing to co-operate. Here are a few of such examples:

- (1) The numerals
- (2) The decimal system

- (3) Mathematical operation symbols
- (4) Angular divisions
- (5) Longitude and latitude
- (6) Time division in hours, minutes and seconds
- (7) The calendar, leap years, etc.
- (8) International date line
- (9) International pitch in music
- (10) The metric system
- (11) International kilogram
- (12) International Postal Union with postal service, reply coupon, etc.
- (13) International Telegraph Union
- (14) International Code of Maritime Signals
- (15) International Morse signs
- (16) International code of signals for air navigation
- (17) International Broadcasting Union, wave band distribution, etc.
- (18) International Wireless Telegraph Convention
- (19) Electrical units and standards
- (20) Electrotechnical vocabulary
- (21) International Code of Botanical Nomenclature
- (22) International Code of Zoological Nomenclature
- (23) Chemical formulae and nomenclature
- (24) Notation in music
- (25) International Red Cross
- (26) International agreement for prisoners of war
- (27) International copyright
- (28) International trade-mark registration
- (29) International meteorological co-operation
- (30) International co-operation concerning lighthouses
- (31) International Union of Academies
- (32) International commission for decimal classification for documentation
etc.etc.etc.

As quoted above, there are 670 organisations which deal with international matters. But the short list shown above is reassuring enough to convince us, that international co-operation does exist. Just think, that countries may be turned upside down politically, but no government would be foolish enough, to renounce the above listed international co-operation. Why?

Just because it is so extremely practical. Just because it is so much more simple and practical to co-operate and have the co-operation of others rather than stand alone, or stage a counter system.

And here is another very important and very reassuring fact:

All these international undertakings are in fact very young. Most of them are about 50 - 70 years old. Actually, they are "babies" only, but look what healthy babies they are. They are not affected by the plagues and diseases which afflicts this planet.

In most cases, the men who took the lead for international co-operation have been scientists. The word "international" is less than 170 years old. The word is only a symbol for a trend, but the symbol in itself proved highly creative in increasing this trend.

In our days a new word has been invented, which in itself will prove highly creative

i n t e r - d e p e n d e n t

Instead of the word-explosive "independent", which is not only very vague in meaning, but in most cases false to facts. An event in one country may have fateful repercussions in all the other "independent" countries. We all, the human beings and the nations are inter-dependent. We all depend on each other. And we all benefit by any international co-operation and should do our best to bring it about.

And the only way to do so is to follow the lead of a few men of a great scientific or governmental institution.

In 1855 the London Board of Trade adopted a committee to work out an improved code of maritime signals to be used by English vessels only. Very quietly all the other nations adopted it, without cumbersome conferences, without heated debates, proposals and counter proposals.

It was just as easy as that. However, it was only possible, because one great nation had already put the whole idea in practical operation. Any ship captain, who bought the book about the English flag symbol code could read all messages of English vessels, and in turn, his messages could be read by all English captains. Translations were soon worked out, and today captains who could not converse with each other in their respective languages, can converse in signals.

If one great nation takes a lead, others will follow, simply because it is the most practical thing to do.

And this might be the case too with the introduction of semantography.

A SIMPLE WAY FOR THE INTRODUCTION OF SEMANTOGRAPHY

"If no concerted action be taken, the question (of an international language) will remain in a state of chaos, and the lack of official organization brings a great risk of overlapping, dissension, and creation of rival interests, and generally produces a state of affairs calculated to postpone indefinitely the supply of the demand."

W.J. Clark (45)

"Two pasigraphies (pasi = for all) have obtained practical application and official recognition, the International Code of Maritime Signs adopted in 1864 and the Bibliographical Decimal Classification proposed in 1873 by Melvil Dewey, President of the Association of American librarians."

Max Talmey (46)

Semantography could become a reality, swiftly and efficiently, if a few great countries would agree to print university research bulletins in it. The other countries would follow in order to be able to use those bulletins and to take part in the great advantages as pointed out in a previous chapter (page 64).

Today we may hope that international co-operation in scientific and educational matter could be achieved quickly, because such an international authority is already in existence - UNESCO.

But semantography could be launched, even if only two great nations like the United States and the British Commonwealth of Nations would agree about it. It might even work, if only one of these countries started sending out research sheets to everyone interested. It might even work, if only a few of the leading universities, say for instance in the United States, took the lead for the initial work and if one great foundation would provide the means.

It would be so much more practical for other nations to join, than to stage a counter system

Some people may suggest proposals for improvements. Very well!! The established Institute for Semantography and the Society for Semantography is open for everybody. The Institute and the Society are ready to co-operate with the universities and scientific foundations.

A trial period of 2 years may be initiated. Linguists and amateurs may co-operate; written texts in all languages would be translated into semantography by different nationals, and then re-translated in the original and other languages, until all the possible pitfalls are recognized and properly dealt with.

Then simple text books would have to be worked out for students. Courses would have to be established. At the same time, the acting universities would start issuing sheets with short summaries about their research.

With the help of a leading scientific foundation, these sheets should be offered free of charge to all other universities for a couple of years. Every encouragement and every help should be given to all universities who proposed to establish courses for students and found it advisable to establish a printing department to print their own sheets.

A world wide distribution centre should be established. It would soon pay its own way, as private persons and institutions, doctors and engineers, hospitals and factories would be interested to get all sheets in their respective field. Publishers of scientific books might be interested to have a sheet about their new publications sent out to all science workers the world over. In this way, present scientific activities could be greatly enlarged.

The doctor in South Georgia, the engineer in Peru may be able to read reports of a doctor in Malay and an engineer in Persia and they would be able to write letters to each other, both writing and reading in their respective different mother tongues. It may help in saving lives, in raising crops and in alleviating the miseries of man.

The costs involved for the initial trial period are small. The great foundations have spent large sums for scientific undertakings and expeditions. Here is a scientific undertaking, an expedition into a daring new idea, which could change the relations of the nations for the better.

UNESCO, the United Nations Educational, Scientific and Cultural Organisation has been created with great hopes of all concerned. The scientists united in UNESCO could make symbol writing a reality. The author hopes that this new idea would find interest with the men of UNESCO.

BUW WHAT ABOUT AN INTERNATIONAL LANGUAGE WHICH CAN BE SPOKEN ?

"Zamenhof was willing that his Esperanto should be reformed, transformed, or even discarded altogether, provided it be in favour of a language so established and supported that it would be secure once and for all."

A.L.Guerard (20)

Opponents of semantography may say that it does not solve the pressing need of an international spoken language. Against this may be said, that semantography solves the pressing need of international communication through reading and writing. Nevertheless, a South American and a Frenchman, who could correspond with each other in semantography, could not speak to each other, should they ever meet.

50 years ago, when Esperanto radiated great hope for an international language, this idea would have been rejected, even by the author. He would have never attempted to work on such a system. In those days we pinned our hope on Esperanto, which could be written, read, and spoken. Today after the heroic and enthusiastic, but futile efforts of hundreds of thousands of Esperantists in all countries we may think differently.

Today we have come to realize that people will learn a foreign language or Esperanto under force only, be it the force of self-preservation, the necessity to make a living in a foreign country, or the force which parents and schools exert on children. But even then, we have come to realize that language teaching has proved a failure. Millions of pupils in all countries fail to acquire even the rudiments of another language in many years study.

The world may realize now that learning to speak another language within the environment of the mother tongue seems to be one of the major difficulties of the human mind. We may draw the conclusion from the breakdown of all efforts to introduce an international language. Today, the world may be ripe to accept a symbol writing which allows everyone to remain within the mother tongue, yet make himself understood to other people, although only by writing and reading and not by speaking.

And here is another lesson we may learn from the struggles for Esperanto, Ido and all the other projects. Dr. Zamenhof and all the many scientists, the mathematicians, logicians and linguists, who enthusiastically supported Esperanto, realised very soon the faults of Esperanto (Zamenhof already in 1894) and the necessity for improvements. In the successive congresses many proposals were brought forward, but defeated. The "fundamento" (containing the first vocabulary, grammar etc.), in spite of its defects, was declared inviolable. This lasted until 1907 and it was the time of the greatest spread of Esperanto. Why? Because every new learner was aware that every word he learned would remain, would not be changed and he would not be forced to unlearn. It was exactly the stability of Esperanto which proved most fruitful, in spite of the faults. When improvements were put forward and accepted by a part of the followers, (Ido, Nov Esperanto, Reform Esperanto, Esperanto II etc. etc.) the whole movement was split and in fact, broke down.

What lesson can we learn from this?

We can realize that if certain words or symbols are established, which have proved workable like 1 2 3 4 , . ; : ? ! etc. they should not be altered. Otherwise anarchy would follow. We have enough of it already.

If a leading university would carry out a test and endorse the workability of semantography we might then make the assumption that one symbol is just as good as an alteration of it and may proclaim a stability period to give the idea time to grow up and to become healthy and strong. Later on, it could stand some beating and if then certain new symbols or some alterations might be adopted, it would be without danger to the idea itself.

When semantography has gained a firm foothold, a new hope may come over the horizon for all supporters of an international spoken language.

THE DREAM OF AN INTERNATIONAL SPOKEN LANGUAGE COULD COME TRUE -

- THROUGH SEMANTOGRAPHY.

"Though several interlanguages still claim a handful of enthusiastic supporters, it is probably true to say that most people who now advocate an artificial language approach the prospect with a ready ear for new proposals. The plethora of projects... should not make us despair of unanimity. On the contrary, failure brings us nearer to accord. As Jespersen remarks in the beginning of his book on his own constructed auxiliary (Novial):

"All recent attempts show an unmistakable family likeness, and may be termed dialects of one and the same type of international language. This shows that just as bicycles and typewriters are now nearly all of the same type, which was not the case with the earlier makes, we are now in the matter of interlanguage approaching the time when one standard type can be fixed authoritatively in such a way that the general structure will remain stable, though new words will, of course, be constantly added when need requires."

Frederick Bodmer and Lancelot Hogben
(5)

"It is difficult to answer questions about the neutrality of Esperanto in the East. There are a thousand million of people to whom Esperanto is no more than a dialect of French or Spanish."

Charles K. Ogden (29)

Referring to the above quotations, Jespersen as well as Bodmer and Hogben are of the opinion that all the recent projects of an International Language are based on Greek and Latin roots, whereas Ogden declares that Esperanto (which has many Greek and Latin roots) would be more alien to the peoples of the East than English, in particular Basic English.

If all the languages would have a similar grammar, a similar word order a similar meaning of word combinations, then translation would be a mere exchanging and adding of words, like beads on a string. If this would be the case, then it would be simple to learn some 500 or 1000 words of an international auxiliary language and use those basic words in a similar way, like the mother tongue.

But unfortunately this is not the case. The contrary is true. All the languages have grown differently, are overloaded with archaic forms, have different grammar, word order, and idiomatic word combinations. This all makes foreign languages a torment for the learner. Translation becomes a nightmare, grammar a horror.

One of the greatest pitfalls is word order.

Man has speaking difficulties.

Speaking difficulties has man.

Difficulties in speaking man has.

Every boy and girl today learns mathematics in school. Mathematical rules are equally the same in all languages.

Semantography may establish a definite word order and grammatical system, valid in all languages, like mathematics. If students the world over have acquainted themselves with the word order and grammar of semantography and use it constantly - then, and only then, - 500 or 1000 words may be chosen for speaking purposes.

Then all the promoters of an international auxiliary language may come to the fore. The merits of words in Basic English, Interglossa, Esperanto, etc., etc. could be examined and the best chosen. All these proposals contain Latin and Greek roots, which are already used to a very great extent in most scientific and technical communications and even in the every day speech of many nations.

To all promoters of an international auxiliary language goes the urgent plea to give this proposal their earnest consideration. We know that all those enthusiasts are idealists who work for a common understanding, and they have shown many times (see quotation on Zamenhof on page 79) that they are ready to give up any system for a better one, provided it would lead to a firmly established international language.

Semantography cannot be "spoken". It is therefore no competitor to an international spoken language. But it could be the vehicle to bring it about.

SEMANTOGRAPHY FOR PRACTICAL PURPOSES

"A new cause is not safe until it has been taken up by practical men who will not help it unless it helps them. Some of these men, of a liberal turn of mind, are willing to take a reasonable risk; but if they see no profit except in the dim future, no theoretical sympathy will induce them to lend their support to the scheme. Between the moment when a new idea is a fad, and the moment when it becomes a money making proposition, there is an awkward gap to bridge. Men of the right stuff are needed, enthusiastic, yet sane and patient."

A.L. Guérard (20)

"The world could hardly get along today without international travellers' checks. Similarly it will not long continue to endure the inconvenience caused by the lack of international communication."

Walter D. Head (44)

The Board recommends that Rotary Clubs be urged to give continued co-operation to every agency that is endeavouring to find a solution of the problem of an international auxiliary language."

Resolution of the Boards of Directors Rotary International
(44)

The title of this book refers to semantography as a practical tool for science, industry, commerce and traffic. The author hopes that from these quarters support for semantography may come. In the Introduction and Summary on page 10 the practicability of semantography has been mentioned for

- | | | |
|-------------------|------------------|---------------------|
| the scientist | the teacher | the student |
| the technician | the missionary | the stamp collector |
| the businessman | the farmer | the intelligent |
| the civil servant | the newspaperman | man and woman, |
| the doctor | the inventor | boy and girl |

The reader is kindly asked to peruse the pages 10 - 12 where special mention has been made of special practical purposes.

In the second book "Semantography" special chapters will show symbols for many practical applications. Here are a few titles of these coming chapters:

- The semantographic typewriter for engineers and scientists in industry (page 94)
- Symbols for international weather reports (page 100)
- Practical symbols for everybody (page 104)
- Symbol writing for international calendars (page 105)
- Symbol writing for the farmer (page 108)
- Symbol writing in international postal communication (page 121)
- Money and business (page 247)
- Symbol cables (page 266)
- Agreements and treaties (page 268)
- The abuse of patents (page 270)
- The wheel and the railway (224)
- The pen and the book (page 227)
- Important symbols for every-day
- An International Menu-card. (page 319)

Other symbols for practical purposes are shown in various other chapters. This book should serve only one purpose: to show that a simplified symbol writing could be a practical proposition to bridge the language barrier.

Apart from practical applications it is shown that the symbols reveal the inherent meaning of the words they represent and in some cases, they reveal the inherent danger. Today the peoples of the world find themselves exposed to a bombardment of higsounding words, which are very vague in meaning and which are dangerous. A symbol writing which could bring clarity in our thought and in our words may turn out to be a most practical thing. Nothing is more practical than the preservation of peace within the family and within the family of nations.

Here are the two great and unique advantages of semantography:

- (1) The symbols are readable in any language and anybody could communicate by using his mother tongue.
- (2) The symbols show the inherent meaning of a word and to some extent the inherent danger.

These two advantages set the idea of semantography apart from any previous proposal for an international auxiliary language.

These advantages are so important that every man and woman, interested in peace and progress, should devote a few hours to this book and should examine the proposal without prejudice.

What is most important in such an examination is, that you should not give just a glance here and there. Go patiently through the pages until the symbols appear to you simple and self-explanatory, just like 1 2 3 appear simple and self-explanatory to you right now.

E P I L O G U E

"Zamenhof the linguist, has shown in Esperanto that it is possible to construct artificially a language which is easy to learn, expressive and practical in both the spoken and written forms. Ogden the philosopher, has shown us how to take into account the semantic or "meaningful" content of words. Dutton, the business man, has suggested a way in which the project may be made more attractive and of immediate practical value to the masses. Hogben the scientist, has pointed to a way in which we might harness the evergrowing volume of international scientific vocabulary to our purpose and take an active part in encouraging and shaping an evolution already taking place. What visionary would follow, who, taking the best of the materials and designs these forerunners have provided, will be able to forge the key the world is seeking? And what great statesman will take this key and put it into the lock?"

Stanley Rundle (15)

With this last paragraph Stanley Rundle concludes his recently published, highly illuminating book LANGUAGE AS A SOCIAL AND POLITICAL FACTOR IN EUROPE (Faber and Faber 1947). He criticises strongly all proposals made hitherto and he devotes much space to the apparent difficulties of language learning.

When we realize that the mother tongue acts like an irresistible force, which prevents the acquisition and constant use of a foreign tongue we may come to the conclusion that, however ingenious a new international spoken language may be devised, the people will not use it - even if it should be taught in school. Not even force could help. Rundle himself mentions the fact, that Lithuanians were prohibited by penalty of death to use their mother tongue with the result that 200 years after the verdict was issued 93% of the population spoke only Lithuanian.

The case of travellers, immigrants and fugitives must be considered separately. These people are thrown into a foreign environment where sheer self-preservation forces them to learn and use a foreign tongue. But they will readily fall back in their mother tongue whenever possible. The large communities in the United States, Canada, South America and other immigration countries, which stick to their mother tongue are ample proof for this fact.

The mother tongue seems to be a "force" like gravitation. We have realized that we can't get rid of gravitation. Yet, we have devised vehicles to overcome it. When we lift ourselves in the air, we are still heavy and earthbound, but we fly. Semantography may become a similar vehicle. We may remain earthbound and heavy, we may go on using our mother tongue, yet we would be able to lift ourselves above the language barrier.

Semantography may prove a success where all international spoken languages have failed. It may prove workable, because it is a different vehicle all together. And we may find hope in the fact, that such a symbol writing is already in use in China, where 450,000,000 people, speaking in different tongues, are united through the bond of their common writing.

A P P E N D I X

HOW SEMANTOGRAPHY CAME INTO BEING

"The written language of the Chinese has survived almost without change for some four thousand years, and is used throughout the whole of the Chinese empire and with certain modifications by the Japanese. To a Chinaman anywhere the symbol 月 immediately conveys the meaning moon. If he is in Peking he will read it yue, in Canton üt, in Shanghai yō or in Foochow ngwok. We thus have a system where the people in various provinces have their own spoken dialects for communication among themselves, but where the written language bridges these differences and unite the whole empire. Those Europeans who are so eager in the cause of "progress" to suggest the abolition by the Chinese of their "antiquated" script in favour of the adoption of a phonetic alphabet like our own, would do well to consider carefully precisely what this would imply. We in Europe have devised international written languages, as distinct from spoken only in specialised cases, as for instance when we write numerals which are universally understood, but which are read in different ways over the whole continent."

Stanley Rundle (15)

"It is now a commonplace that two people from different parts of China can read the same texts without being able to converse with one another. To seventeenth-century Europe it was a nine days' wonder."

Frederick Bodmer and Lancelot Hogben (5)

To me, a twentieth-century European, it was a nine days' wonder too. Here is my story.

The outbreak of war in 1939 found me as factory manager in England, separated from my wife on the continent, where her life was endangered. With great hardship we managed to go, I via Canada and the Pacific, she via Siberia and Manchuria and we met in Shanghai. Then the war came to the Pacific. We stayed there for 6 years. There we experienced privations, bombs and destruction - but I would never miss those 6 years in Shanghai.

China is fascinating and what fascinated me most were those queer and mysterious Chinese characters on shops and houses, in newspapers and books, and at night in thousands of multi-coloured neon tubes filling the sky and making it a beautiful sight out of a fairy tale.

What is the system behind those Chinese characters? Why so complicated, why so difficult and cumbersome? To find out about it, I hired a teacher. I learned to read and I learned to write.

After one year of study I gave up learning. I found Chinese writing a highly cumbersome and complicated affair, overloaded with archaic symbols, arbitrary to a great extent. But the wisdom contained in some characters held me in a spell. Besides I experienced a strange feeling, such as any foreigner may experience who tries to penetrate that great barrier, which Lin Yu-tang called the second Great Wall of China, the Chinese writing.

I could read shop signs, I could read street names and notices. I could read head lines in the newspapers - but I read all this in my mother tongue, not in Chinese. Later on, the familiar words of my language disappeared in my mental translation of Chinese characters and I could visualize directly the real things depicted by the signs. I experienced the vividness and easiness of reading an ideographic writing. I became absorbed by those Chinese characters. I went "oriental". Now I understood the saying of a great European professor at the university of Peking. Questioned about the future of the white man in China, he answered: "In 100 years, we will all be Chinese!"

Then I understood the unifying factor of the Chinese ideographic writing and why the efforts of past governments to introduce a phonetic writing have failed. But I understood too, how the writing could standardize and unify the grammar and word order of different languages. Today with a large Chinese film industry and the acceptance of the Mandarin "dialect" as the national language, the unification of Chinese tongues has made great strides, but this is only possible because the ideographic writing has set a pattern of word order and grammar for all tongues spoken in China.

Then I remembered my work as a research chemist in Europe. For months and years I had to work in university libraries. I had to read thousands of patent specifications, reports, dissertations, articles and books. Although in more or less fair command of four major European languages I experienced great difficulties and I realized the benefit of Latin for science in the past and the great handicap of the language Babel for the science of today. I had my own experiences in the laboratory, about the necessity of a world-wide information service, unifying all scientists in all countries.

In my youth I believed that Esperanto was the solution. I tried to learn it, but I soon gave up. I found the grammar too trying and complicated. In fact grammar and foreign languages were the torment of my boyhood. Chemistry, Physics, Mathematics and Geometry were mere child's play, but foreign languages brought me some times to the brink of disaster. I hated grammar and language learning as only a boy can hate. I believed that I am and shall always remain a total ignorant as far as foreign languages are concerned.

Then I came to Italy as a soldier in the first world war, and learned Italian within 5 months. I simply had to speak. It was a sheer necessity. On business trips in France I learned more French than in years of study.

In that city of Shanghai, the most international town of the world, where more than 22 different nationalities existed side by side, I saw language at work. I saw Russian refugees of the 1917 revolution who lived in Shanghai for 25 years. Some of them, working constantly within their own community could only speak Russian. The others had to go out to make a living and, according to their work and environment, learned English or French, Chinese or Japanese. I witnessed the same process in the many thousands of refugees from Europe. I saw the intelligent Chinese "boy" in the various foreign households, picking up English, French, Italian, Dutch, German, Japanese and other languages. But at home, amidst their own family, all those different people spoke only their mother tongue.

In Shanghai I realized the enormous strength of the mother tongue and the only force which could overcome it: self-preservation, the necessity to make a living or starve. There I realized too why foreign language learning in school, a few hours a week and amidst the environment of the mother tongue must be a failure. Now I understood why wise parents send their children away to a foreign country, to a foreign school, where a child surrounded by foreign children is forced to learn the other language in order to overcome the unending loneliness, and make friends.

In Shanghai I realized that people would use Esperanto only if forced to do so and as such force would not be exerted, the proposals for an international language might prove to be a failure.

But there in China I realized that the only possibility to use the mother tongue and still bridge the language barrier is an ideographic writing such as the Chinese use, but it had to be a better one, a writing simple and clear and one which people should be able to type on a typewriter of ordinary size.

It was a fascinating idea. There were the sometimes unbearable black-out nights, the fall of bombs, the uncertainty, the anxiety about the tomorrow, the air raids. I thought it a good idea to keep my mind occupied in the evenings with a fascinating toy. And in the beginning I toyed only with it.

I realized my great handicap. I was totally ignorant of linguistic problems. I considered grammar an instrument of torture. I had never heard of "semantics" and was completely ignorant of the problems of language planning, and of all the proposals for an international language, except a few bits of Esperanto. In short: I was a complete ignoramus in all matters pertaining to language. Only a fool could have attempted such a thing, and I know today that I would have never attempted it, if I had just glanced into a few books on linguistics, logics and semantics. The only thing I knew was that Ogden's Basic English consisted of only 850 words. That gave me some hope. And there was something else too.

From my experiences in the factory I knew that often success is achieved by approaching a problem from a new angle and unburdened by experiences of past failures. Quite often I succeeded in finding a simple solution in a maze of difficulties. My friends called me a "systematist".

And so in full knowledge of my inexperience in language planning I set out on this fascinating venture, remembering Gray's words

Where ignorance is bliss
'tis folly to be wise

My mood actually changed to bliss when I found out that it was possible to reduce the necessary number of symbol elements to less than 100.

Less than one hundred elements? Why it's like in chemistry. And some of my compound symbols worked like chemical symbols, revealing the inherent structure... it looked like a crackpot idea, or may be, perhaps.....

I had to do something about it.

On the 23rd of January 1943 I gave my first public lecture before an audience of European and Chinese students. After explaining my system, I asked for words and sentences to be translated into symbols. It was a success.

From my factory experience I knew that an inventor cannot look with impartial eyes on his brain child. So I hired a language teacher to criticize with all his might. He was opposed to the whole idea. He was the right man to give it the coup de grace. For nearly two years, five evenings a week, he drove me almost crazy with impossible words and sentence perversions. I am a practical man and I would have given up, but the foundations of my system withstood the onslaught. Then I started to hope that - may be - perhaps - I really got something.

The war ended and peace came to Shanghai. In May 1946 I spoke before U.S. Army officers and then before the Rotary Club of Shanghai. I shall

never forget their cheers. "Stick to it! Write a book about it! You ^{have} really got something!"

I went home through the streets of Shanghai, oblivious of all the rickshaws, the crowds, the traffic. I trod on clouds.

In July 1946 I went with my wife to Australia. In Sydney I had the first opportunity to go to a great library and to get the books on linguistics, language planning, logic, semantics etc. There I realised with horror the chasms and abysses over which I trod lightly in my ignorance. But then I read about language reforms and the ideas of Leibnitz and others and I realized that I had somehow hit on similar ideas and moreover, I had worked out a practical system; at least this is what I believe.

My Shanghai story is not yet finished. There was another experience which impressed me even more and which perhaps furnished the ultimate stimulus for my work. It's a strange tale and only those will acknowledge its truthfulness, who lived in Shanghai and loved this aspect of that fascinating city.

Two world wars in quick succession and the turmoil of this postwar world may have convinced anybody that all those nice words about "international understanding" may be termed mere "windy talk". On this basis, all attempts for an international language or the like may seem a hopeless venture, condemned to failure right from the start.

My belief in "international understanding" was shattered too, when I set out in 1940 in a war-torn world to reach Shanghai. At that time I would have considered the work on an international language as a waste of time and effort. But strangely enough, it was this unique city of Shanghai which convinced me that "international understanding and co-operation" is possible, is a reality. In Shanghai I saw it miraculously at work.

After Wendel Wilkie's "One World", the talk for a world government has not ceased. However, the apparent difficulties which the United Nations Organisation encounters, may have convinced countless people that the idea of a world government may be a phantasy only, a delusion, impossible to realize.

Those people may perhaps be glad to learn that a "world government" on a small scale, in which all nations had their say and moreover were they worked together for the common benefit, has been a reality for almost a hundred years, and it worked, it worked beautifully - in Shanghai. I refer to the unique organisation of the International Settlement of Shanghai, an international governmental organisation which ruled and influenced an area with about 5 million inhabitants, a greater population than in many independent countries.

People, who have never been to Shanghai or have been only there for a short visit, got their "knowledge" mostly from gangster novels and spy thrillers.

Consequently most people in the world believe that Shanghai must be the worst place on earth. After six years of study at close quarters I maintain that Shanghai is the only place in the world which can give us hope and proof, that a world government and international co-operation and understanding is possible. The history of the now non-existent International Settlement of Shanghai proves conclusively that a world government can work, even under the worst conditions, and can achieve results nowhere obtained by a national government.

This is not the space to give a comprehensive account. Only a few paragraphs must suffice.

The government of the International Settlement was exercised by the consuls of all nations, situated in Shanghai. They appointed a board of directors, the Municipal Council of Shanghai. This body was as international as the consular body. Moreover the number of Chinese councillors, exceeded that of any other nation. There were also British, American, Japanese, German councillors and others taken from other nations.

The international Municipal Council directed the activities of a few thousands of officials, who were responsible for the work done by many thousands of employees in the administrative offices, the works department, the health department, the city markets, the fire brigade, the telephone company, the power company, the water works, the street cleaning service, the garbage collection, the sewerage, the cemetery maintenance, the harbour service, the police force, etc. etc. not to forget the public libraries, schools and the Municipal Philharmonic Orchestra. All those officials, engineers, clerks, typists and workers were again recruited from all nations.

I couldn't believe my eyes, and it was a source of constant wonder, whenever I set foot into the offices of the Municipal Council, to see all those nationals working together harmoniously. Even as late as 1941 with a world war raging for 2 years and the Sino-Japanese war raging for 4 years (or actually 10 years) I saw in one office working together Chinese, Japanese, British, German, American, Italian, Russian, Spanish people, Swedish, Portuguese and people from other nations. The head of one office was a Britisher and under him worked Germans, Italians, and others. The head of another office was a Japanese, or an American, or a Chinese and they too directed their employees of other nations. Although their respective countries were at war with each other, here they sat, desk to desk next to each other and worked together. It was international co-operation - a 100% - even under the stress of a world war.

The resultant successes were obvious for anybody who probed into the matter, and even spectacular for those observers who took into account the terrible conditions of the whole Chinese continent, neglected for centuries by the Imperial Chinese government and - after 1911 - groaning under the yoke of countless war lords, who devastated the provinces, even more thoroughly than floods and famines could do. Plague and cholera and other diseases killed off millions. Among this incredible misery of a whole continent, Shanghai was an oasis, a heaven of refuge, the only place where peace and order and health were maintained and from where the work of reconstruction could be carried out. Millions of refugees from all parts of China streamed into the city, filled every house and every shack and found there peace and security, work and prosperity.

Only from this perspective must the work and the achievement of the International Municipal Council and its international co-workers be considered. Most spectacular was the work of the Health Department, which kept Shanghai a healthy city, although cholera and plague and typhus branded against the outskirts of the city and filtered in daily. The Public Works Department is responsible for achievements which became a model for the whole of East Asia. Similar praise could be given to all other departments, all of them directed and maintained by workers taken from all nations.

The Police Force again was international. There were British and Chinese constables, American and Japanese, Russian and Indian as well; and so on throughout all the ranks to the top officers.

One of the most spectacular things was an International Army, recruited wholly from volunteer citizens and with an organisation, which had to be seen to be believed. Contrary to expectation the various battalions were organised on national lines; there was an American battalion, a British battalion, a Scotch battalion, a Chinese battalion, a Japanese, a Portuguese, a Philippine battalion, officered wholly by co-nationals. There was even a Jewish battalion, officered by Jewish officers.

One should believe, that this organisation on national lines should be a dangerous thing, considering that these battalions were given up-to-date arms, rifles and machine guns, mortars and even light field artillery. Yet, so great was the spirit of international co-operation, that the Municipal Council trusted its international citizens and not once was there an incidence that this trust was unjustified. In every emergency, the volunteer soldiers of all nations manned their battle stations and -

- through their determination - warded off destruction throughout the wars and upheavals which raged in China and branded against the outskirts of Shanghai.

But the most spectacular proof of the efficiency of the international government of Shanghai was the almost incredible fact, that there was no income tax in Shanghai. Nevertheless all the departments of the government worked, the health department, the fire brigade, the street cleaning service, the police, etc. etc. All governmental workers received their decent pay and all was achieved without the exertion of an income tax.

The explanation is furnished by the fact that Shanghai was governed by an international body. Not only was there a constant control exerted by the various nationals on each other, the consuls in those young days of Shanghai were business men too. They knew how to run an efficient business and they figured out that all can be done with a minimum of expenditure. All the work was done without income tax. A ridiculously small land tax, calculated only from the floor space of an office, a shop, an apartment, a cottage, was sufficient to cover all expenses. The power company, the telephone company, the water works furnished some additional means and in the same time worked in an amazing way for the maintenance of all the city services. If you did not want to pay even the small land tax, no force could be exerted on you, but then you could not get electricity, water or a telephone. This was the only gentle persuasion which the government could exert. But it usually was not necessary. The citizens realised the necessity of all the services for the common good and moreover the International Settlement breathed a "free" air. Every grievance could be voiced in the many papers and the internationality of its councillors and officials ensured remedy and betterment.

Even the Imperial government of China and the successive governments found it wise to put the management of their revenues in the hands of an international body of foreigners and the Chinese Maritime Customs for instance, became one of the greatest sources of revenue for the Chinese government. This money came largely from the trade with the outside world carried on by the foreigners who have built Shanghai. Those people outside of China who know nothing of Shanghai, except that it came into being by violating Chinese territory, have not the slightest idea what the International Settlement of Shanghai meant to China and the Chinese. For the impartial observer it is clear, that the International Settlement was the greatest blessing the Chinese people received during the last hundred years. Apart from a world wide trade which benefitted the whole Chinese people, there were the many schools, technical and other colleges, universities, hospitals and industrial enterprises which were manned by foreign teachers, doctors and engineers, and maintained by foreign money which opened up a window of knowledge for the young generation of Chinese and which provided the teachers, doctors and engineers, all Chinese, to teach in turn the whole continent. If China makes now great strides in industrialisation, agriculture and health maintenance it is thanks to the many Chinese who were trained in the foreign schools and industries of the International Settlement of Shanghai.

The internationality of the "world government" of Shanghai was reflected in the attitude of the international inhabitants of this city. If you are a business man, or a doctor, or a consulting engineer or a teacher in Shanghai and you have to deal with people of ten or twenty different nations in a single working day, then narrow-minded "nationalism" must become utter nonsense. There was only one distinction, which totally disregarded nationality: the character and integrity of a person. People referred to other people by using an expression in Pidgin English. "He proper", they said, or "he no proper".

Of course the people of Shanghai loved the country of their birth, its language, its literature and its music and there were many national literary and musical performances, attended by an international audience.

The Shanghai Municipal Philharmonic Orchestra, one of the finest in the world, catered to an international audience and consequently its repertoire became most international. People appreciated and acknowledged the cultural achievements of other nations.

Now, don't think that the people of Shanghai were "better". No! They were the same people as you find them all over the world, with their full measure of virtues and vices, of shortsightedness and narrowmindedness. Yet, it was exactly that atmosphere of world citizenship that made people think in broader terms. In Shanghai it became obvious for anybody (including the worst narrowminded nationalists) that international co-operation is the most sensible and also the most practical thing to do, and so they co-operated, they became broadminded, because it was the Shanghai way of life.

This broadmindedness manifested itself in all walks of life. Not only were there international friendships among the various nationals, the members of the various institutions and clubs maintained friendly relations, even as late as 1941, when their respective countries were at war with each other. It was for me a constant source of wonder when I saw the members of the Shanghai Camera Club, for instance, belonging to the warring nations, meeting once a month to discuss art and to part in respectful friendliness.

Besides the International Settlement, there was the French Concession and the parts of Shanghai under the jurisdiction of the Chinese government. Yet, the beneficial influence which the International Settlement exerted, made itself felt everywhere. It was simply impossible to deny liberties to people outside the International settlement, or to burden them with heavy taxes, when those people could easily escape all this, by moving within the boundaries of the International Settlement.

This marvellous "atmosphere of a world government" intoxicated me. I felt very happy living in Shanghai. Funny as it seems, even the summer air of Shanghai, although very trying and laden with humidity, became to me exhilarating and invigorating like the mountain air of Switzerland. I love Switzerland, which I visited on many hiking and business trips, not only on account of its natural beauty, but especially for the fact, that there live people of four different nations, which exhibit a truly international co-operation. In Shanghai I saw the same international co-operation on an even wider scale.

Some readers may think that I have dwelled too much on the praise of the International Settlement of Shanghai. However, all I said I consider very important in regard of this book. It is easy to dismiss the whole efforts of all people, interested in an international language, by denying international co-operation. And in fact, the difficulties which UNO encounters, are enough to convince all pessimists. Therefore I had to tell at length about the spot on the Chinese coast, where international co-operation worked marvels.

It was exactly the spirit of the International Settlement of Shanghai which brought this book about. In Shanghai I saw language at work. In Shanghai I saw the mother tongue at work, and its irresistible strength.

In Shanghai I saw an ideographic writing at work, and in Shanghai too, I saw international co-operation at work - and therefore Shanghai convinced me that work on international communication and co-operation is worthwhile and will bear fruit.

I have no illusions about this book. I know that the world at large think differently and that I am bound for great disappointment and even ridicule. It may well be that I shall not live to see my idea come true.

Shanghai however, has convinced me that a world government is possible and that - sooner or later - it will come about. And I believe that a kind of ideographic writing, as proposed in this book, will be used by the world government and the national governments to bridge the 3000 languages of the inhabitants of this planet.

B O O K I I .

T H E S Y S T E M O F S E M A N T O G R A P H Y .

A W A R N I N G T O T H E R E A D E R

"Read not to contradict or confute; nor to believe and take for granted; nor to find talk and discourse; but to weigh and consider."

Francis Bacon (47)

This is not a textbook and not a primer, not a dictionary and not a complete explanation of the system of semantography.

It is written to show how those 100 elementary symbols work and the other symbols of minor importance. It is written to prove that it is possible to write simple and unambiguous sentences which have a similar meaning in different languages. It is written to prove that this system could bridge the language barrier.

The following chapters are written somewhat differently to a textbook on language. There are no exercises and not many examples to steady the reader and make him more acquainted with the "language". The book is intended as an informatory study only.

If there is enough interest to warrant the issue of a small textbook with exercises and a dictionary, it will be forthcoming in very short time.

6 years of hard work are compressed in this book. Everyone who thinks that it could be done better may be assured that many good symbols have been discarded in order to comply with difficulties of which the casual reader may not be aware. The author will gladly receive any suggestion. He hopes that this book will achieve its purpose which is to attract the interest of scientists and students and especially to ensure the help of the universities and the great scientific foundations.

Here is an opportunity for everyone to join in a new and fascinating pioneer work.

I N T E R N A T I O N A L S Y M B O L S

"Those who write Interglossa should freely use internationally current ideograms, such as ~ \$ + - ♀ (female or Venus) for she, her, hers ♂ (male or Mars) for he, him, his, ♄ (hermaphrodite or Mercury) for one one's, ☾ for moon, ? put at the beginning of a sentence or clause for the interrogative particle, &, etc, as also all international abbreviations, e.g. g(gram), l(liter), m(metre), etc. We can also economize space

(92)

by breaking away from the humanistic tradition which prescribes the formula one hundred and sixty-three thousand nine hundred and seventy-two for the compact ideogram 163972, and by using 0 and 1 respectively for the articles zero(no) and un(a,the)"

Lancelot Hogben (2)

We will make extensive use of the following well known international symbols

1 2 3 4 5 6 7 8 9 0	.....10 symbol-elements
+ - × ÷ =	..... 5 " "
, . : ? ! " ' ( ) % #	.....10 " "
	alltogether 25 symbol-elements

This makes a total of 25 symbols, exactly a quarter of the first 100 symbol elements of semantography.

If you are benevolent you may say; "These symbols are known to everybody. We don't need to count them as new symbols!"

Very well! But it does not make much difference. We shall see later on that the important symbol elements which occur again and again are less than 100 in number; in fact about 50 to 60 are doing most of the job.

Even the Chinese are using now the symbols ? ! , . () because they are so simple and practical.

A P R E H I S T O R I C I N T E R N A T I O N A L S Y M B O L



"Arrow, a mark like an arrow or arrowhead, as on a chart or a sign-board to indicate direction."

Webster's New International Dictionary(28)

We find the arrow on the oldest rock drawings. It is certainly one of the most widely used international symbols. We find it everywhere on roads, buildings, railway stations, etc.

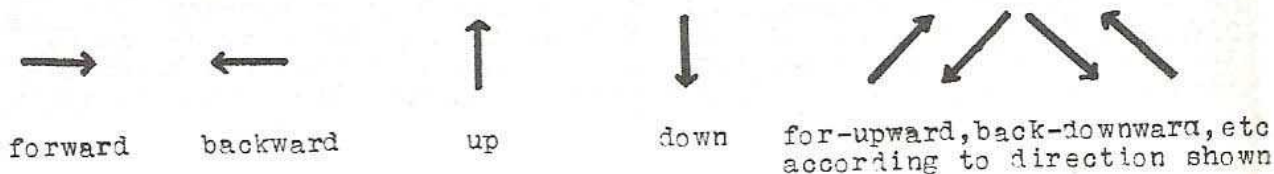
The mathematicians use the arrow in vector analysis to calculate forces and velocities. The geometrists use the arrow on drawings to indicate a direction, a distance, etc.

In semantography the arrow is used as a very important symbol element. It shall primarily indicate a movement in a certain direction. A movement is an action.

Wherever you see an arrow in a symbol, you should realize that it indicates primarily an action.

The direction of the movement is indicated by the direction of the arrow. Here however, we face the same difficulty as the cave man. Our world is three dimensional. Our writing pad, as well as the surface of a rock is two dimensional. Artists, with the exception of the sculptors, encounter the same difficulty, also children who draw the outline of things.

Well, we will have to overcome this major difficulty as best as we can. Western writing goes forward → from left to right. Even the Chinese are getting accustomed to it. Here then are our first symbols, formed by derivations of our symbol element, the arrow.





turn



jump



swing



circulate



mix

These movements are performed somewhat in "empty space". Let's now erect a sign post, the line of reference, another important symbol element



start
begin



departure



forward



approach



arrival
end, stop

These symbols seem self-explanatory. We may continue in the same manner



to pass by



to continue



to pass through

Let's now have more fun by playing with two arrows.



attraction



meeting



separation



repulsion



to and fro



up and down



competition



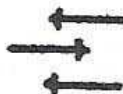
concord
harmony
agreement

Man in his forward drive encounters counter-forces, obstacles, difficulties, troubles, which seem stronger than his forward drive. We will depict these with two arrows driving backwards.



counter-forces, obstacles, opposition, difficulties, troubles

Yet, man faces these counter-forces courageously in his forward drive in spite of all, and in overcoming the difficulties arrives at success.



spite
in spite of

and



forward

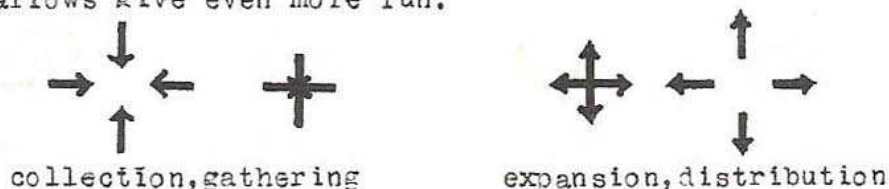
to



success

These symbols should give courage.

Four arrows give even more fun.



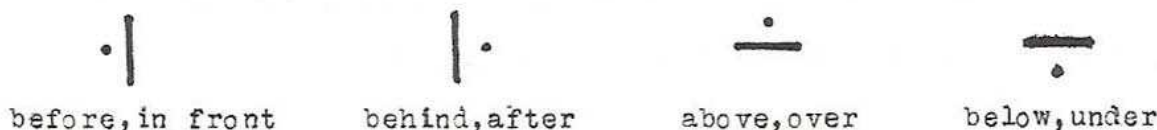
The symbols could be used alternatively, the first indicating the gathering in full swing, the second symbol indicating the gathering just ended. Similar use could be made with the other two symbols.

How many symbol elements did we use in all symbols depicted in this chapter?

Only two. The arrow and the line of reference, put in different positions to indicate different meanings.

The line of reference is a very important symbol element, especially from the psychological point of view, as we shall see later on. In this chapter we are going to see how the line of reference can be used together with another important symbol element (already counted on page 92) the dot or mathematical point, to indicate position.

As we go forward → from left to right, we may place the dot before or after the line of reference to indicate



These symbols have a clear meaning with reference to the line we draw. Consequently words like: a spot over (or above) the window, and even authority over men are translatable in other languages by using these symbols. However idiomatic uses like work left over or over night are untranslatable and meaningless in other languages if the actual meaning of over is used. For such expressions the symbols cannot be used. This becomes obvious for the symbol writer. He can see it right away that he can't write work left over with the spatial symbol indicating above. However he can use it when writing work left over the second shelf.

This example shows how idiomatic uses are excluded from semantography. Every language contains thousands of idiomatic uses, which are the despair of the foreigner. Here is one of the main pitfalls of translation. In semantography this pitfall is avoided.

T H E T Y P E W R I T E R

"Certainly the art of writing is the most miraculous of all things man has devised."

Thomas Carlyle (48)

(see also pp. 89 and 139ff of this edition)

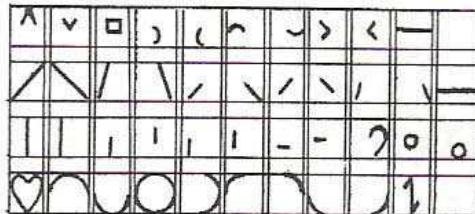
In the first chapter we have learned a few symbols. In this chapter we shall learn how to write them with the semantographic typewriter.

This is a typewriter of the ordinary size. The keyboard shows the usual set of types and keys, which are used to type the small letters of the alphabet, and a few of the usual symbols like , . ? ! (). We are thus able to write any international word like proton, radio, television or other scientific or Latin terms like appendicitis, amoeba, as well as any geographical name. We can even write complete letters in English or another language. We would only miss the capital letters, which are superfluous anyway (as this paragraph shows).

Here is the first set of the keyboard, the usual arrangement which we find on any typewriter.

2 3 4 5 6 7 8 9 0 ?
 q w e r t y u i o p !
 a s d f g h j k l ()
 z x c v b n m , . - ' "

The second set (which usually contains the capital letters and is operated by the shift key) contains the straight and curved lines which are used to compose the symbols. Here is the complete set. The lines may be arranged in a different way, according to best practical use.



(Copyright)

The symbols are usually drawn within a square. Each line on the typewriter is set in a distinct position within the square. This is indicated in the drawing above, and may be shown with thinner lines on the keys of the typewriter. The following paragraphs will make this clear.

To understand how the symbols are composed, we shall use the practice of the ordinary typewriter, familiar to most people.

Suppose we want to type some geometrical figures using a letter on an ordinary typewriter:

```

    a      a      a      a a      aaa      a      a      a      aaa
aaa      a      a      a      a      a      aaa      a a      a a      aaa
    a      a      a      a a      aaa      a      a      aaaaa      aaa
    
```

Anybody can do this with any typewriter. We have only to turn the cylinder up or down to get the position we want. Sometimes we would have to shift the cylinder one or two spaces back (or we may use the back-space key for this purpose) because the cylinder jumps always one space ahead after a key has been pressed.

If we want to type the mathematical symbol \perp by typing first the horizontal line $—$ and then the vertical line $|$, we would get this $—|$, simply because the cylinder did jump one space ahead.

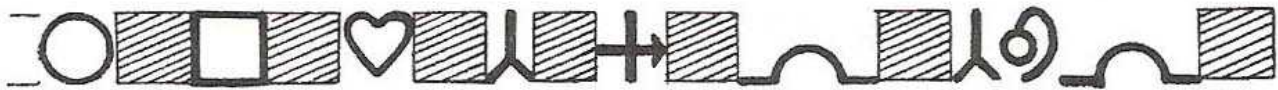
To cut out this automatic jumping ahead, in order to compose the symbols, we may employ a little gadget on our semantographic typewriter. This gadget is operated by a small lever. By turning this lever, the cylinder will not jump ahead automatically, but stay put. The symbol completed, we may then press the ordinary long thumb bar (as on any typewriter) to move the cylinder ahead to the next spacing.

If we then want to type ordinary alphabetical words we may turn the lever back and thus engage the automatic jumping device as used on the ordinary typewriter.

With this new gadget it is now easy to type the mathematical symbol \perp . We type first $—$ and then on top of it (as the cylinder stays put) we type the vertical line $|$. The symbol completed, we press the long thumb bar to move the cylinder in position for the next symbol.

(36)

Between two symbols, no matter how big or small they are, there must be always one full square left, to indicate the separate words.



sun enclosure emotion man through bridge translator

The symbols are printed within two lines, the top and the bottom line.

How big is a square compared with the spacing on our typewriter? If we type the dot, we would get it right in the middle of the square. By going up or down a line we would get



We see that a symbol square is quite big and it extends horizontally over three spacings and vertically over three lines.

Another innovation on our typewriter is a gadget, which makes it superfluous to turn the cylinder by hand, furthermore to move the cylinder backwards (with the back-space key) or forward one spacing (with the thumb bar).

This gadget is operated with a little steering stick or the like. You hold it with your left hand and press the key you want, with your right hand. If you don't move the steering knob, and press the dot key, (for instance) the dot will come out right in the centre of the square. If you move the steering knob up or down and press the dot key, the dot will appear on the upper or lower line. If you move the steering knob at an angle up, down, right or left, the dot will appear in the four corners of the square. In such a way you are able to make the dot appear at nine different positions within the square and you can form the following geometrical constellations:



However if you release the steering knob on your left hand, the cylinder falls back in its original position, in which the dot would appear in the centre. Only if you press the long thumb bar, does the cylinder move finally forward, to take up a new position for the formation of new symbols.

Of course, only the dot is the smallest type; the biggest type fill a whole square and we do not need to move the left hand steering knob at all. Such full-square types are the full circle (sun), the heart (emotion). Other types, like the half circle (for the symbol of the bridge) extend over half a square.

We can type now a few symbols by using the long horizontal and vertical line.



line subtraction addition opening enclosure

And this makes us acquainted with an unexpected advantage of symbol writing: space, time and work economy. It takes us less space, time and work to print those symbols, instead of the long alphabetical words. The symbols above are shown in an enlarged dimension. In reality, the typewriter will print them much smaller.

If symbol writing gains ground, the typewriter people may bring out, in addition to the semantographic typewriter mentioned above, a special typewriter, with a second shift set. In such a typewriter each key hammer carries not two, but three types, like in the old portables with three rows. In addition to the two sets, shown on page 95, this typewriter would carry 42 additional types, giving very important and often recurring composed symbols, like opening, enclosure, addition (as shown on foregoing page). Then one pressing of a key will give you the symbols for these meanings and others.

Needless to say, that it is easy to write semantography by hand. People who want to write it very neatly by hand, could use a draughtsman's stencil, as shown on page 8.

TO ENGINEERS AND SCIENTISTS IN ALL INDUSTRIES !

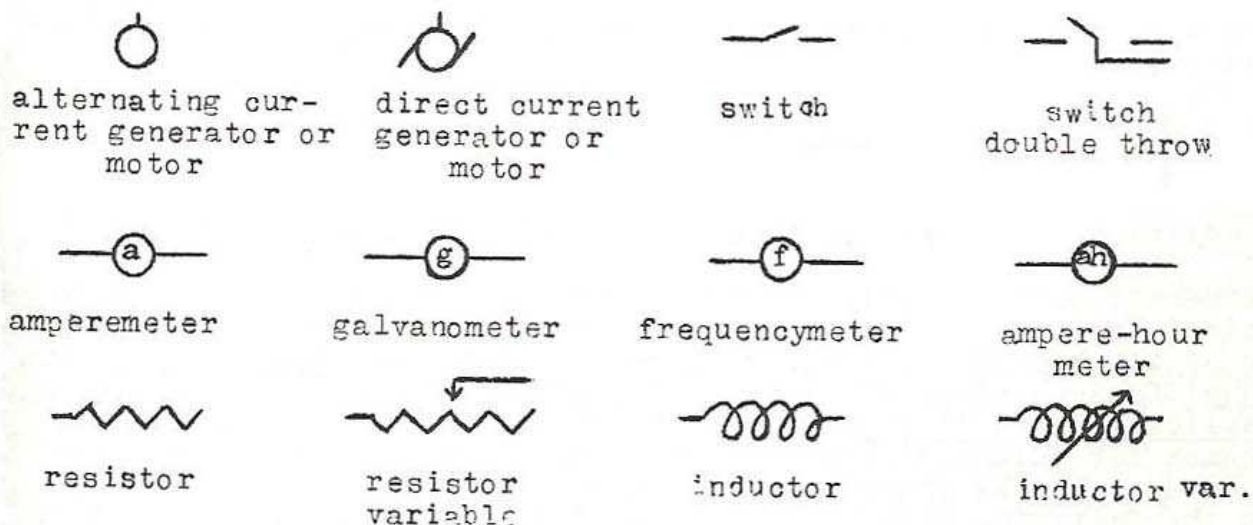
Immediate practical application of the new semantographic typewriter.

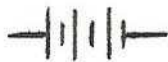
"Modern physics and engineering employ all the symbols used in mathematics besides a wide variety of special symbols most of which fall into two classes, viz: (1) schematized drawings of apparatus and (2) letters (chiefly Roman and Greek)... The usage of letter symbols varies widely, the same letter often having many possible meanings or the same meaning having two or three symbols...

Organised effort to attain uniformity have met with increasing success, but are counter balanced by invention and discovery which multiply the need of additional symbols and the possibility of giving new meanings to symbols already in use.

Webster's New International Dictionary (28)

Engineers and scientists may welcome the semantographic typewriter which would enable them, not only to type reports, but to type into these reports all conventional symbols already in use in engineering and science. Instructions and informations, and even invoices would be more accurate and more to the point when written with the help of already acknowledged international technical symbols. A few examples are shown below.





battery



condensator



condensator
variable



condensator
shielded



rectifier tube
cold cathode



rectifier tube
hot cathode






radio tube
triode



ear-phones

There are acknowledged symbols used in many other industrial branches which could be equally well typed with this typewriter. There is even the possibility to type invoices, which are independent of any language. A firm which sells goods to many countries could make good use of this advantage. Herebelow are a few items from such an invoice:

100		# 3675	\$ 3.45	\$ 345.-
200		# 4573, 0.2 amp, 1000 ohm	\$ 0.30	\$ 60.-
200		# 4665, 300 cm	\$ 0.65	\$ 130.-
				\$ 535.-

FOUR OLD ACQUAINTANCES

"As Dr. Marshman tersely puts it: the whole of Chinese grammar depends upon position. For example, while the root-meaning of ta 大 is "being great", it may as a noun mean "greatness"; as an adjective "great" as a verb "to be great" or "to make great"; and as an adverb "greatly".

Edward Codd (48)

Everyone who has been to primary school knows the meaning of the following symbols



addition



subtraction



multiplication



division

Mathematics, the relation of the numbers, quantities or magnitudes is contained in the basical structure of our universe. Mathematics is at the basis of all knowledge, of all science (the Greek word mathematike means science). Consequently, the basical operations of addition, subtraction, multiplication and division are at the basis of most of our actions and names for things. A great number of words in all languages have these operations as their basical meaning.

In the following paragraphs a list of words is shown, which have the meaning of addition as basical meaning. Many of them differ slightly in their meaning, many of them express shades of different meanings, but principally the meaning of addition, of plus, of an adding up, of additional thing or action is contained in all of them. Consequently the plus symbol will appear in all, or most of them in addition with other symbols to indicate the special meaning.

The meaning of the mathematical plus symbol is contained in the basic meaning of the following words.



It is easy to see that many more words could be added to the above list, conforming with all the special meanings, according to the grammatical differences. In looking up books on synonyms the list could be augmented.

We are here concerned with a simple symbol writing for simple reports and statements. We are not interested in the stylish use and exchange of synonyms, etc. From our point of view we will make much use of the plus symbol to express basically many of the above mentioned words.

In the chapters on grammar we shall learn how to distinguish the different meanings for a thing, an action, a quality. However, our grammar will be a much simplified grammar, compared with conventional grammar.

Until we come to the chapters on grammar, let us learn some more symbols.

THINGS AROUND US

Some symbols for international weather reports

"For the earth he drew a straight line
For the sky a bow above it
White the space between for daytime
Filled with little stars for nighttime
On the left a point for sunrise
On the right a point for sunset
On the top a point for noontide
And for rain and cloudy weather
Waving lines descending from it...

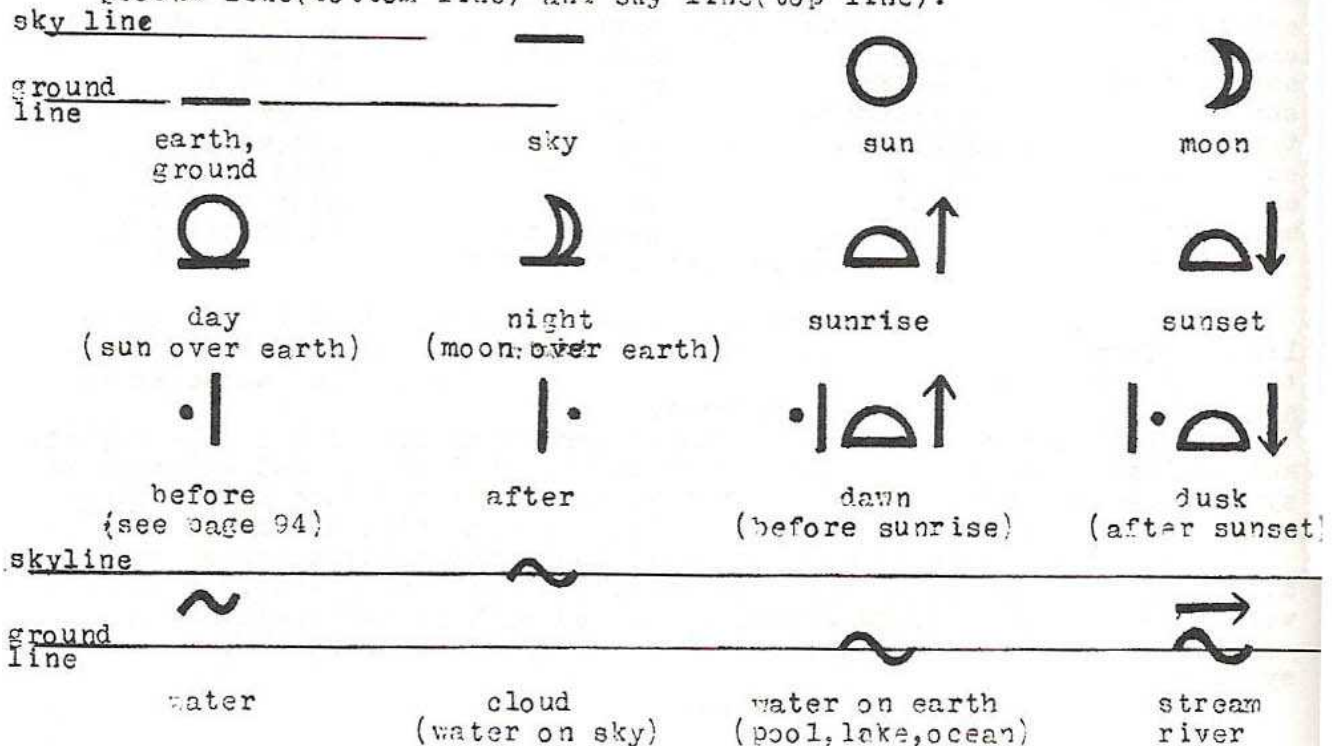
Thus it was that Hiawatha
In his wisdom, taught the people
All the mysteries of painting
All the art of Picture-Writing

































H.W.Longfellow, The Song of Hiawatha (49)

The following symbols depict things of which we speak very often. The symbols follow the outline of those things in a schematical way. Many of these symbols are similar to the way in which children depict those things in their scribbling. They are similar to the symbols used in the early picture writings of primitive man. This should make them understood by most people, no matter what language they speak.

The arrow is again used to indicate ACTION, the arrow head however is used as a pointer only, to point at something.

Don't glance superficially at the list and try to get the meaning here and there. Follow closely one symbol after the other, because the composition of one symbol follows from the foregoing symbol. In doing your study in this way, you will find the symbols most "natural" and in fact, almost self-explanatory. The symbols are written between the ground line (bottom line) and sky line (top line).



			
water below earth	spring (water through earth)	rain (water down)	steam (water up)
			
weather (sun & rain)	star	snow	hail
			
solid matter	ice (solid water)	freezing (water to solid)	thawing (solid to water)
			
ground fog (water above ground)	fog (water below sky)	hole (in ground)	water hole
			
quagmire (water and earth)	swamp (more water than earth)	mud (more earth than water)	island (earth surrounded by water)
			
wave (of any kind)	electricity	lightning (electricity out of sky)	radio (electric wave on sky)
			
mountain	place on earth indicated by pointer (arrow head)	plain (place next to mountain)	valley (place between mountains)
			
sloping down a mountain	falling down a mountain	rapids (water sloping down)	water-fall (water falling d.)

(102)

All symbols shown before have been composed with the following new symbol elements:
earth, sky, sun, moon, star, water, solid matter, hole, electricity, mountain
 altogether 10 new symbol elements. We shall see later on, that hundreds of other words can be composed with these elements. Thus we can furnish symbols for terms in meteorology, geology, astronomy and in general for describing the world around us.

N O T F O R P O E T S

"I believe that the Chinese written language has absorbed the poetic substance of nature...and has, through its very pictorial visibility, been able to retain its original creative poetry with far more vigor and vividness than any phonetic tongue."

Ernest Fenellosa (31)

"The distinctive character of Chinese literature is probably one reason why Chinese tradition has proved more enduring than the Roman. The alphabetical script employed in Europe reproduces only a pronunciation of the language. When the pronunciation alters and the spoken language becomes incomprehensible, the whole literature loses its meaning. So it comes about that those contributions to literature belonging to early linguistic stages are consigned to the realms of antiquity and cease to count as a live factor in civilisation...

In Germany, for instance, Gothic material has now practically vanished from current literature, which comprises the production of a couple of centuries at most. In China, Confucius and Mencius still survive in the consciousness of civilisation."

Robert Wilhelm (30)

The above two quotations reveal a fact, which is practically unknown. The literature of the great nations, English, French, Italian, Spanish, Russian, German etc. etc. of which all are so proud extend only over the few last centuries. All poetry and writing in those languages more than 700 or 1000 years old is hopelessly lost for us, unless it is virtually translated in the language of today. Chinese poetry and literature is the only exception and the cause is that the Chinese used an ideographic writing, independent of language and pronunciation.

In the foregoing chapters it has been said that this new system of semantography should only be used for simple reports in science, industry, etc. etc. Many reader may scorn the idea that it could be used also for poetic expression. They may be rest assured that nothing of the sort is contemplated. However, an excursion into this field will reveal more than anything else the unique advantage of semantography to bridge the languages and moreover to preserve the meaning against the corrosion of time and usage.

There is first the fact, that Chinese poems are hailed as the world's finest by Western scholars who have learned to read them. They are enraptured about the beauty, the vividness and the impressiveness of Chinese poems, in comparison with poems in phonetic writing.

Poems in phonetic writing are a kind of music with rhyme and rhythm. But besides the music, they contain words and we must understand the meaning of them to appreciate the poetical beauty. However, during the centuries the words change in speech and writing and therefore the meaning becomes lost.

"Uran fader thic arth in heofnas, sic gehalgud thin noma; to cymeth thin ric; sic thin willa sue is in heofnas and in eortho..."

Do you recognize this? It is the Lords prayer as written in the 7th century. (6) However the writing does not reveal the meaning to us, as the words have greatly changed.

In Chinese writing the original meaning remains and therefore a poem or a prose writing, written some 2500 years ago remains still fresh and retains the beauty and splendor of 2500 years ago. Moreover it can be read in all of the various Chinese tongues.

And mind you, Chinese characters are a very complicated affair, in which the original picture is almost entirely obliterated. How much more vivid would an ideographic writing be, in which the outline shows clearly the things.

Just for fun, we may try to write a poetical line in semantography. Just for fun, to test the assertion of scholars that Chinese poems are more vivid than poems written in phonetic writing.

To write a poem in semantography, we need to know the symbols for our feelings, which we have not learned yet. (A few have been shown on page 5). Nevertheless, let us write a poetical line with the few symbols we know already



moon goes up over waves of water

It will not be easy for you to appreciate the difference because English is your mother tongue and therefore the line as it stands

moon goes up over waves of water

will be quickly translated in your brain into the mental picture.

But for a foreigner who can't read English, the above line is hopelessly meaningless, just as the following lines are meaningless to you,

or this Luna merge in sus deasupra valurile apei.

ΣΕΛΗΝΗ ΑΝΤΑΝΑΚΛΑ ΠΑΝΩ ΣΤΑ ΚΥΜΑΤΑ ΤΟΥ ΝΕΡΟΥ

unless you understand Roumanian and Greek.

Compare these lines with the ideographic line in semantography



Without mental translation you can directly visualize the silvery moon as she goes up over the glittering waves of water. Even an illiterate would not have much difficulty to learn to read semantography and appreciate its "natural beauty". Of course, the above line is not a "real picture" of the actual happening. The arrow is even an arbitrary symbol to indicate motion. But the symbols are much "nearer" to the real things in this kind of geometrical writing, whereas alphabetical symbols are not. Needless to say, that the above line is valid in any language.

The same line in Chinese characters runs

月上浪頭

A FEW PRACTICAL SYMBOLS FOR ALL COUNTRIES

We see at once the great changes and complications which have taken place in Chinese writing. We see too that the same line in semantography is even more vivid. We may therefore have all reason to hope that semantography may prove a writing more meaningful than phonetic writing, more down to earth and further away from fanciful and often meaningless abstractions.

A FEW PRACTICAL SYMBOLS FOR ALL COUNTRIES

We have learned already the symbols for



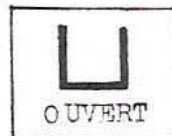
open



closed

We shall learn later on how to distinguish between open and opening, closed and enclosure.

These two symbols could be used anywhere on shops, offices, counters, etc. During the first years of use they should be displayed with the words in the native tongue underneath, different for different countries, like



Anyone would thus learn the meaning of the symbols and would recognize them immediately when travelling in a foreign country.

In using the arrow (which indicates an action) we form other meanings:



enclosure



to move into
to enter



to move out
to exit

These symbols are for general use. For special use we may form other symbols.



door



entrance
IN



exit
OUT

These symbols are practical for cinemas, theatres and other public buildings. When a fire breaks out, most people are horror stricken and often unable to grasp the meaning of EXIT, even less in a foreign tongue SORTIE. The symbol, however, conveys the meaning of



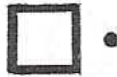
out! o u t ! O U T !

immediately. Any foreigner could understand it.

In many countries such words like EXIT have to be displayed in two, three and even more languages. The symbols would prove an advantage. Herebelow are a few symbols which are equally practical.



in



out



question
(question open)



answer
(question closed)

The dot indicates the position in or out. The symbol for answer indicates that the question is closed. But actually, the symbol still shows the question mark inside, and this has a semantical effect. It indicates that any answer is very often only superficially a closed question. Many answers leave so much unanswered, and many answers are no answers at all, although they may all start with "because".

The symbol for question displayed in banks, travel offices, stores, etc. would be international, would save space and would be even cheaper to make.



instead of

INFORMATION

Many more practical symbols will be shown in the coming chapters. When on display they would acquaint the public with the basic symbol elements. Later on, the public would have no difficulty in getting the meaning of other symbols.

T H E R E L A T I V I T Y O F T I M E

"Time is - Heaven knows what!"

A.S.Eddington (50)

In a later chapter we shall deal with the relativity of space and the relativity of all symbols relating to space. In this chapter we shall deal with symbols for time.

Einstein has told us that we human beings are unable to measure time "absolutely". All our measurements will be influenced by the movement of the masses on which an observer travels through space. There may not even exist such a thing as "absolute time".

The only thing we human beings can do, is to establish a system of reference. Such a system is our solar system, the sun and the earth, which circles around the sun. As any statement concerning time must be made with reference to the place and movement of the observer, the only alternative left to us, is to state time with reference to the sun's and earth's movement. Our symbols for time will therefore exhibit the sun, the earth and also the moon. These celestial bodies have indicated time since man became conscious of it.



sun



morning



moon






evening







SYMBOLS FOR THE SEASONS, DAYS, MONTHS AND YEARS

	 12.00		 24.00
day	noon	night	midnight
	 (but see pages 373 and 416)		
spring	summer	autumn	winter
			
day	sunday	monday	tuesday
			
wednesday	thursday	friday	saturday

We may now write "seven days" as separate words or as a combination

7		7		30	
seven	day(s)	week		month	

However the last symbol for month is a bit awkward. We may choose a simpler and better symbol by differentiating between moon and month. The numbers again will help to indicate the 12 months of the year.

			 etc.
moon	month	january	february
			
september	october	november	december

To indicate the meaning of year by writing 12 months would be awkward. We may invent a simple symbol to indicate that the sun has completed one full cycle.



All the aforementioned symbols should be useful for calendar makers. They have used symbols for centuries. They should also be interested in an international calendar, which could be sold all over the world. At present their job is hazardous. Either they print too few calendars and can't meet a bigger demand immediately, or they find themselves with unsold stocks, which cannot be sold elsewhere on account of language. Moreover, in some countries, calendar makers must print calendars in 2, 3 or even 4 different languages (as for instance in Roumania, where 12 different languages are spoken).

International calendars, readable in any language.

1948							D4
1	2	3	4	5	6	7	
				1	2	3	
4	5	6	7	8	9	10	
11	12	13	14	15	16	17	
18	19	20	21	22	23	24	
25	26	27	28	29	30		

1943	D4	
1	4.	
3	5.	
3	6.	
4	7.	
5	8.	
6	9.	
7	10.	

1948
1
D4 5

for the month

for the week

for the day

Such calendars could be sold anywhere, in Roumania, as well as in Fiji or Madagascar. During the first years of such calendars, it would be necessary to insert one leaf, giving the meanings of the new symbols and the special holidays, expressed in the native language. Later on, symbols for the holidays could be introduced.



emotion



joy



day



holiday

The foregoing symbols are all good for the time interval of day, week, month, year, etc. but we need symbols for the hour, minute and second. Moreover we need a good symbol for the meaning of time.

To indicate large time intervals we referred to moon and sun. To indicate small time intervals we refer usually to a "time-piece", a watch, and the outline of its dial will serve to indicate



time

We can now use the old symbols to indicate an angle, say $135^{\circ} 15' 30''$



angle



degree



minute



second



time



hour



minute



second

For ordinary purposes we may write



In the theory of relativity the 3 space dimensions and 1 time dimension are treated equally in complicated mathematical operations. This is very difficult to grasp. But we may find that primeval man did a similar operation since he started to speak. We may be astonished at the aspect that primeval man treated time like a single space dimension. In the coming chapter on THE UNION OF SPACE AND TIME we shall see that all prepositions, adverbs, etc. pertaining to single space dimensions are equally used for time dimension. One example may make this clear. We know already the following symbols



start
begin



stop
end

The symbols serve
equally well for
the prepositions

from

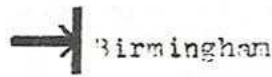
to

These prepositions are used equally for space and time dimensions as the examples below prove:



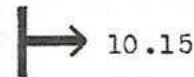
Start: London

from London



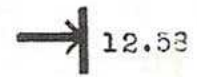
Stop: Birmingham

to Birmingham



Start: 10.15

from 10.15



Stop: 12.58

to 12.58

In all cases, mentioned above, the two symbols give a clear meaning, equally valid in space and time.

We shall see later on, that the same preposition is used for space and time dimensions, not only the prepositions shown above from and to, but also other prepositions. The same rule occurs also in other languages.

Modern medicine has developed new theories, new medicines and new cures and it was found sometimes that people of bygone generations have hit on the same thing. Modern physics has developed new theories about the union of space and time, and it should not surprise us, that primitive man in evolving language has treated space and time dimensions alike and used the same word for both.

S Y M B O L W R I T I N G F O R T H E F A R M E R

"I believe that this universal language is possible and that one could discover the science on which it depends, by means of which the peasants could better judge the truth of things than do the philosophers at the present time."

René Descartes (4)

"This figured character... would be very agreeable to the people, just as in fact, the peasants already have certain almanacs, telling them without words much that they ask..."

Gottfried Wilhelm Leibnitz (7)

More important for future peace than conferences, industrialisation, rehabilitation and education is the production of more food. The great













bulk of human troubles might be over, if only we could have an abundance of food, so cheaply, that everyone could fill his belly. A full belly is very soothing, even for a revolutionary. As a soldier in the first world war, I have been at a time almost crazy with hunger. Then I knew what hunger really means. As a young engineer, with a small salary, I deeply resented the fact, that most of my earnings went to satisfy the craving of my stomach lining. Then I knew why people sometimes revolted.

More important than anything else could be the establishment of great agricultural research stations all over the world, which would develop new seeds, new plants, new agricultural methods for special lands and climates. Those stations would naturally be staffed by native agriculturists who know the soil, the climate, the plants, and who could speak with the farmers. However, direction and co-operation on a planetary scale would be necessary, to direct and team-up all the work. Seeds and methods would have to be exchanged and all the progress reported.

For those international reports and for all the necessary world-wide correspondence a huge army of translators would be necessary, people who know English, and other languages and in addition native dialects of India, Burma, Africa, etc. etc. - or - semantography is adopted in which every native science worker is able to read and to write in his native tongue.

Moreover, seed packages of a new plant, say a new sturdy, hardy wheat, must contain some directions. The farmers may readily forget what the travelling lecturer told them some time ago. But how to write for the farmer, most of whom cannot read and write? Teaching them an alphabet, which for many dialects and languages have to be designed yet, would be a hopeless beginning. But simple symbols, showing the outline of things could be something which they would readily grasp.

The following symbols show a few, which we have already learned in previous chapters and some new symbols, which are easily recognized as the outline of things.

			
sun	spring	month	april
			
earth	seed (dots below earth)	grain (stalks)	field (grain on earth)
			
cutter sword, knife	cutting grain harvesting	plough earth cutter	water

Incidentally, the symbol for the plough, showing the outline of earth and sword, looks really like a plough, indicating symbolically, that swords are turned into ploughshares.

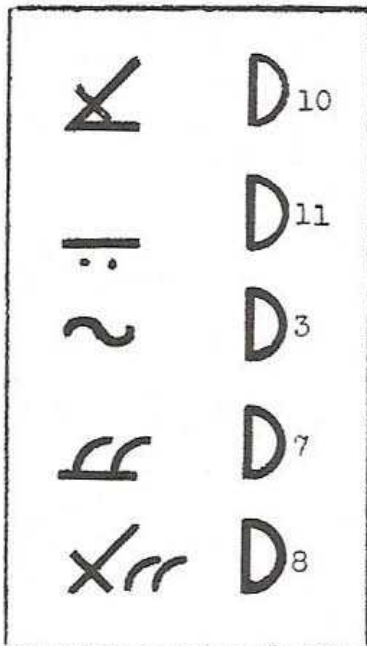
INTERNATIONAL DIRECTIONS ON SEED PACKAGES

Herebelow is a sample of how such a direction on a seed package might look like. It may look a bit too simple, but this is because we know only a few symbols. In a later chapter a more elaborate sample is demonstrated.

Directions on a seed package

in semantography

translation



plough field in october

sow seed in november

water the field in march

field in full bloom in july

harvest(cut grain) in august

Instead of the numbers for the months we could use symbols indicating each month by other means, using the symbols for seasons with additional signs, for instance december, the month with the lowest stand of sun, etc. Let us not forget, that farmers have used symbols in their calendars for centuries (see the quotation at the beginning of this chapter).

In honour to the farmer, let us write our first sentence in semantography.



What however is the symbol for farm and farmer?



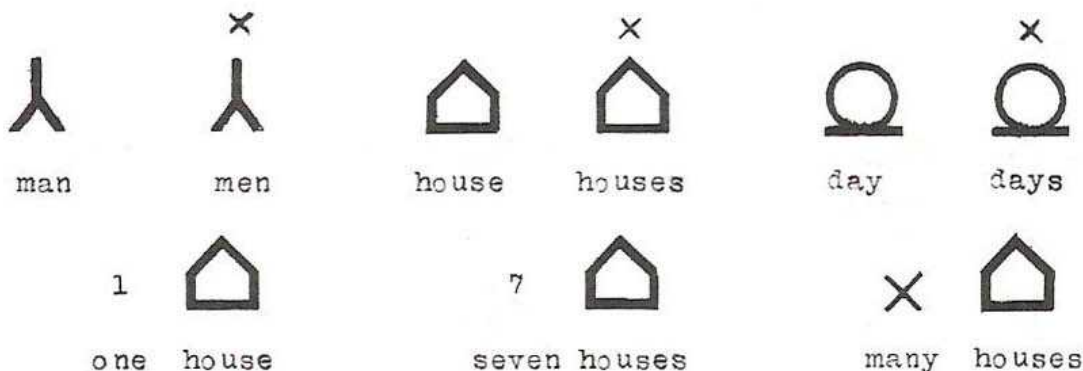
T H E L I T T L E M U L T I P L I C A T I O N M A R K

"We'll begin with a Box, and the plural is Boxes.
 But the plural of Ox should be Oxen not Oxes;
 Then one fowl is a Goose, but two are called Geese,
 Yet the plural of Mouse should never be Meese.
 You will find a lone Mouse or a whole nest of Mice,
 Yet the plural of House is Houses, not Hice;
 If the plural of Man is always called Men,
 Why shouldn't the plural of Pan be called Pen?
 The Cow in the plural may be Cows or Kine,
 But the plural of Vow is Vows, never Vine.
 If I speak of a Foot and you show me your Feet,
 And I give you a boot, would the pair be called Beet?
 If one is a Tooth, and the whole set are Teeth,
 Why shouldn't the plural of Booth be called Beeth?
 If the singular's This and the plural is These,
 Should the plural of Kiss ever be nicknamed Keese?
 The one would be That, and two would be Those,
 Yet Hat in the plural would never be Hose,
 And the plural of Cat is Cats and not Cose.
 We speak of a Brother and also of Brethren,
 But though we say Mother, we never say Methren.
 Then the masculine pronouns are He, His, and Him,
 But imagine the feminine She, This, and Shim.
 So the English, I think, you all will agree,
 Is the funniest language you ever did see."

From a textbook on English (51)
 by MacCallum (see p. 78 under 51)

In honour to the English language it may be said, that most languages have much more plural irregularities. German notably, is a real nightmare in regard of plural forms.

In semantography we shall have no difficulties of such kind. The plural is simply formed by putting the little multiplication mark on top of the symbol.



Naturally we do not need to put the plural mark on top of the symbol if we put a plural number before it, like 7 hous(es). We avoid the double plural on cheques by writing 7 Pound, not Pounds.

Similarly, the multiplication mark put before the symbol means many another plural word. In doubling this symbol we get the meaning of very many. However, it may stand also for much and very much.

THE MANY WORDS FOR MEANINGS OF GROUPS OF THINGS

1	X	XX
one, a, an, single	much, many	very much, very many



	X 	XX 
happiness	much happiness	very much happiness




	X 	XX 
tree	many trees	very many trees

The repetition of the symbol is found in Chinese characters, as well as in most languages. A candy means in French bonbon (good-good). Weak means in Singhalese beri, and beriberi means the great weakness, a special disease. Man has invented thousands of words in all languages to stand for special multitudes. And in semantography these words can be easily expressed by putting the symbols together; seven days (contains one empty spacing between both words), but sevendays (written together) takes on a new meaning in semantography, namely week.

7 	7 	14 
seven days	week	fortnight




X 	X 	XX 
many houses	village	town

X 	X 	XX 
many trees	grove	forest

ground line — X 	X 	XX 
much water (on the ground)	lake	ocean

X 	X 	XX 
much rain	downpour	cloudburst

X 	X 	XX 
many books	collection	library

X 	X 	XX 
much happiness	jubilation	bliss

M A N Y or F E W, M O R E or L E S S

"Ye are many - they are few!"

P.B.Shelley

In all languages, there are many words which may be called opposites. Such opposites are for instance, hot and cold, light and dark, etc. In semantography we may easily express the opposite of one word, simply by placing a special symbol, expressing opposite, before the symbol of the particular word. We shall derive our symbol from the picture of two arrows pointing in opposite directions:



up & down



opposite
meaning

This little symbol will help us to express many hundreds of words. However we must be aware that many words are not strictly the opposite of other words in meaning (mathematically and physically) Hot and cold are opposite in usage, but very vague in meaning, as experiments with different people prove and even meaningless if expressed in degrees centigrade. In fact, such words as hot and cold pertain to human evaluation only and the opposites many and few belong to the same class. In the foregoing chapter the symbols for many and very many have been used to denote a village and a town and we must realize that this is a vague differentiation. Nevertheless, for ordinary usage in every-day speech, the opposite of many is few and therefore we may use our new opposite symbol to express such meanings.



many



very many



few



very few



much



very much



little



very little



village



town



hamlet



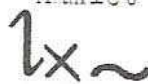
outpost



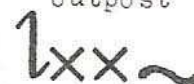
lake



ocean



pond



puddle



downpour



cloudburst



shower



drizzle



jubilation
delight



bliss
rapture



little
enjoyment



very little
pleased

(114)

We may note that the meaning of few still indicates a multitude and this is expressed by the multiplication symbol.


As said before, the meanings of many and few shall be termed human evaluation and in fact, there might be argument, whether a village is a hamlet or not, whether a shower is a drizzle or not.


We can, however eliminate these human evaluations simply by making mathematical statements. Houses can be counted in numbers, rain can be counted in inches.

Happiness, however, cannot be measured mathematically. It is a sense reaction within our skin and different within different skins.

Keep this well in mind, because the paragraphs above are a preliminary to the new grammar of semantography, based on chemistry, physics, biology and psychology.

Thousands of words in all languages express a big or small multitude and can be reduced to the basical meaning, by showing the relevant symbol and the multiplication mark.

 water in motion can be termed stream, river, rivulet, brook, etc.

 unhappiness can also be termed despair, grief, worry or just a little down.

How should we express the comparative and the superlative as in

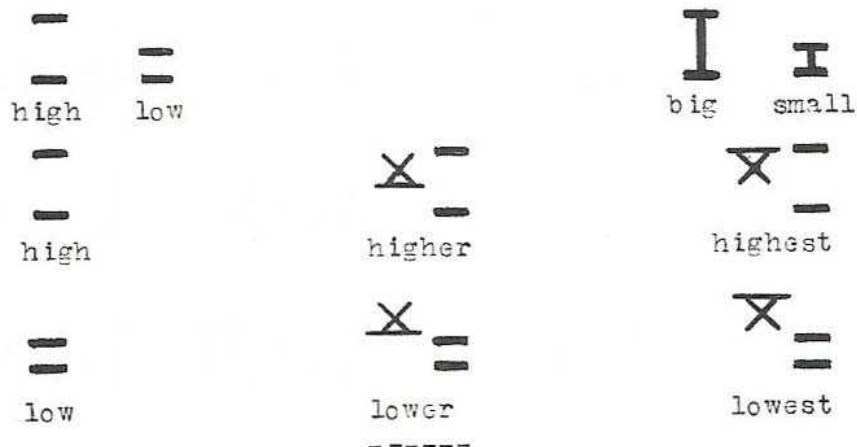
	much	more	most	to express
for instance	high	higher	highest	

Higher is just on a higher level and for the expression of highest only our skyline is the limit. This can be easily expressed geometrically.



If we write nicely on a specially lined paper, we may place the multiplication symbol in the right places as shown above, and may omit the under- or over-lying line for more and most. But on paper not lined, and if the symbols are not nicely drawn, it is better to draw the lines for more and most to increase legibility.

We can now draw the symbols for high, higher and highest. Using the opposite symbol, we can draw low, lower and lowest. However, if there is a chance to draw opposite meanings without employing the opposite symbol we shall do so, because we save the drawing of the additional opposite symbol. The following new symbols shall make this clear.































THE LITTLE POINTER

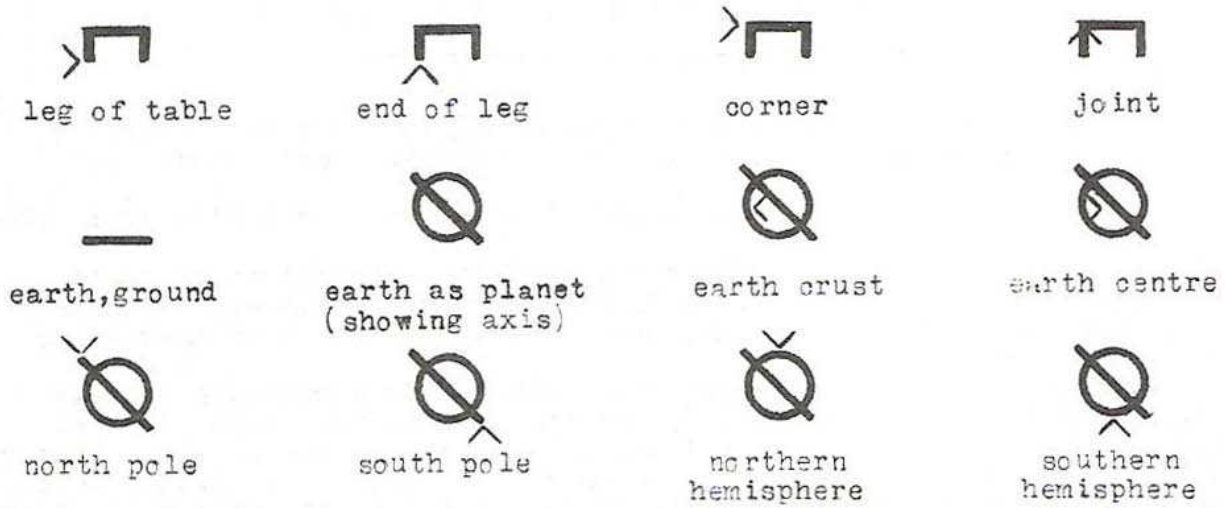
"To indicate the position or direction of, as with the finger; to direct attention or notice to; to give prominence to; to indicate;"

Webster's New International Dictionary (28)

Sceptics may say: "These symbols may be quite all right to indicate some simple things of our daily life. But they are hopelessly inadequate to express special details of all these things, for which so many words have been invented."

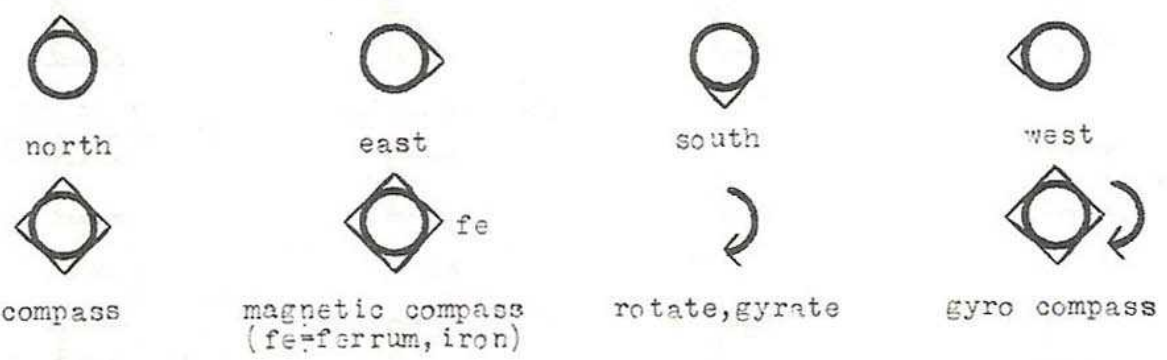
Yet, semantography may turn out quite capable of expressing details of things. We have to keep in mind, that the symbols represent in most cases the simplified outline of things. The outline contains some details, and if we employ a little pointer to point out these details, this would immediately indicate the detail itself. As pointer we may employ the head of an arrow. Our typewriter contains this type in a thinner line, so to make it distinctive as pointer. Below are a few examples, some of them are new symbols but easily recognized as the outline of things.

				
mountain	basis	foot	slope	
				
top	ridge	precipice	foot of precipice	
				
room	ceiling	wall	floor	
				
corner	ceiling-cover	wall-cover	floor-cover	
				etc.
enclosure	bottom	lid, top	side	
				
matter	enclosure with nucleus	crust, shell	nucleus	
				
table	surface of table	board-plate	edge	



In placing the arrow head in different positions we are able to point out other meanings like equator, earth axis, etc. This involves sometimes a certain arbitrariness, as the meaning changes according to the position of the pointer. In other words: we have to be told, what each position means. But we face this difficulty also in ordinary language. If a man has never heard of the pole or the equator, these words have no meaning to him, until somebody explains it to him. He will have to explain it by means of a graph. The semantographic symbol furnishes this graph.

We can make use of the pointer in other ways, as the examples below show.

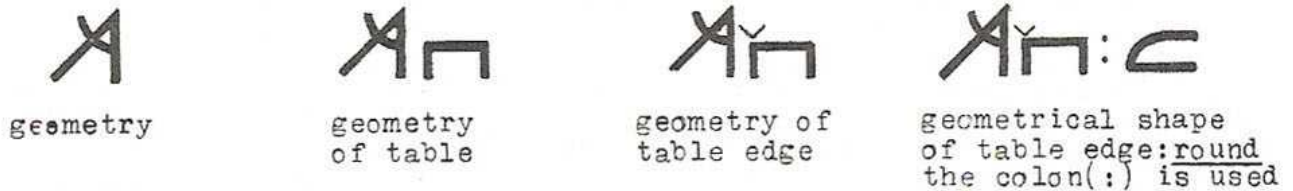


Fe is the chemical symbol for iron, internationally recognized all over the world.

PLEASE NOTE THAT THE TYPING OF THE SYMBOLS ON THE SEMANTOGRAPHIC TYPE- WRITER INVOLVES LESS WORK THAN THE TYPING OF THE ORDINARY WORD.

To write the words north or south on an ordinary typewriter, we need to press the keys 5 times. On the semantographic typewriter only 2 keys are pressed (one with the shift key). The same applies for most of the above shown meanings.

This pointing out of details by means of the pointer symbol has of course its limits, dictated by the limitations of our typewriter and the scantiness of the outline shown. However, if necessary, we can overcome this too. If the outline is insufficient we can draw an enlarged portion of the thing. We must however, warn the reader, that the coming symbol is a geometrical detail. To do this, we may place a new symbol before the symbol in question which would indicate geometry. The outline of a so-called pair of compasses will serve.



Usually, only architects and joiners may be interested in such details. In ordinary language we would say: a table with rounded edges. But even this will not tell you how the edges are rounded. The symbol above show however the real shape.

We face, of course, the difficulty to depict three dimensional things on our two dimensional writing surface. Later on we shall see, that our semantographic typewriter enables us to draw things in perspective.

If we are in doubt about some symbol and its meaning, we would do what we always do: we would look into a dictionary.

There are technical dictionaries on the market, which give in 6 columns the meaning in 6 different languages. In some of such dictionaries a schematized drawing is added to depict a few items.

We may visualize the coming of a technical dictionary in which the symbols already recognized, together with the symbols of semantography are depicted. Below are a few samples showing the meaning in 7 languages: English, French, Spanish, Italian, Portuguese, German and Russian. The first symbol is an international sign, the second is a semantographic symbol.

PROPOSAL FOR A TECHNICAL DICTIONARY

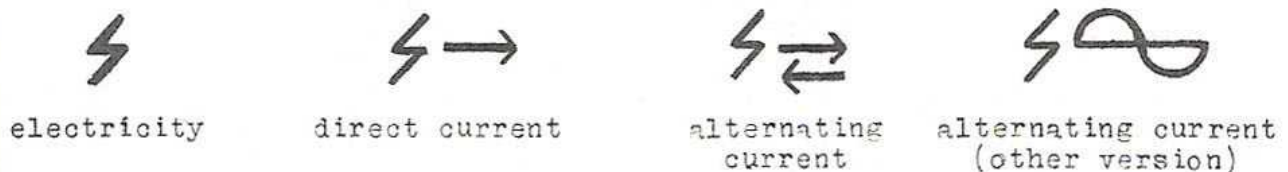


- (1) Alternating current motor
- (2) Moteur à courant alternatif
- (3) Motor de corriente alterna
- (4) Alternomotore
- (5) Motor de corrente alternativa
- (6) Wechselstrommotor
- (7) Двигатель переменнаго тока



- (1) Adjustable or rising and falling table
- (2) Plateau à monte-et-baisse, ou déplaçable verticalement
- (3) Mesa de alzibaja, ó móvil verticalmente
- (4) Tavola spostabile verticalmente
- (5) Mesa que sobe ou desce, ou móvel verticalmente
- (6) Verstellbarer Tisch; auf- und ab beweglicher Tisch
- (7) переставляющийся вверху и вниз столъ

The symbol for alternating current motor now in use, is very scanty. However, if semantography is adopted by the engineers, we should have no difficulty to invent simple symbols for clear meanings, for instance



It is obvious that we could thus avoid much arbitrariness in present day symbols, and arrive at symbols clearer in meaning and understandable to engineers of all nations.

We may use semantographic symbols even in medicine. This science has retained the Latin names to the advantage of all the doctors. However, there is a huge army of nurses, hospital attendants, etc. who never learned Latin. Moreover there are many organs and parts of our body, the names of which are used in daily speech. It is easy to depict these meanings in symbols, by drawing an enlarged section (if necessary) with the symbol of geometry (as we did on the foregoing pages). The following samples depict details of the eye. In a report about an eye treatment, we may drop the geometry symbol, after the first lines, as the reader would know already that the report deals with the eye and details of the eye.

SYMBOLS FOR MEDICAL PURPOSES



eye



geometry
of eye



enlarged frontal
view of eye, indi-
cating the iris



eye:pupil

As said before, we may drop the geometry symbol sometimes.



eye:side view
enlarged



eye:retina



eye:lens



eye:cornea

Even the symbol for eye may be dropped, and the enlarged schematized drawing shown above used as a symbol in reports or directions for eye-treatment, etc.

Medical men who know and use the Latin names may use them even in reports written in semantography. Our typewriter carries the alphabet too.

This chapter contains a few samples only. The reader may rest assured that the same practice can be extended to thousands of other meanings.

PARTS AND PARTS OF PARTS

"In toto et pars continetur. The part also is contained in the whole."

Many thousands of words in all languages express a part or a part of a part of a thing.

<u>flame</u>	is a part of	<u>fire</u>
<u>drop</u>	" " " "	<u>liquid</u> (water)
<u>finger</u>	" " " "	<u>hand</u>
<u>chapter</u>	" " " "	<u>book</u>
<u>word</u>	" " " "	<u>sentence</u>
<u>syllable</u>	" " " "	<u>word</u>
<u>letter</u>	" " " "	<u>syllable</u>
	etc. etc.	

In a previous chapter we have dealt with words expressing multitudes, and we have employed the multiplication mark for them. We may now use the division mark to express a part.

However, this may be a doubtful procedure. Whereas the multiplication mark indicates always a multitude, the division mark before a symbol may cause doubt, whether it expresses the whole to be divided, or the part already divided.

These considerations have led to the conclusion, that it would be better to have a special symbol to express a part.

+

part

Or we may simply use the division mark \div to stand before other symbols to indicate the part meaning as shown on page 130 (new edition) for flame, chapter, letter, also p.136 drawer, p.137 branch, feather.

The symbol shows a line parted by a horizontal stroke. In putting this symbol before another symbol, we indicate the part, as for instance








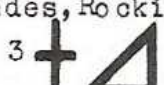
			
fire	flame	water	drop

Now let us use the mountain symbol to show that there are words to express a multitude of mountains, or parts and parts of parts of a mountain, all expressed in words of our every-day language.

<u>range</u>	expresses	<u>many mountains</u>
<u>massif</u>	"	<u>very many mountains</u> containing <u>many ranges</u>

<u>rock</u>	expresses	part of	<u>mountain</u>
<u>boulder</u>	"	" "	<u>rock</u>
<u>stone</u>	"	" "	<u>boulder</u>
<u>sand</u>	"	" "	<u>stone</u>
<u>powder</u>	"	" "	<u>sand</u>
<u>dust</u>	"	" "	<u>powder</u>

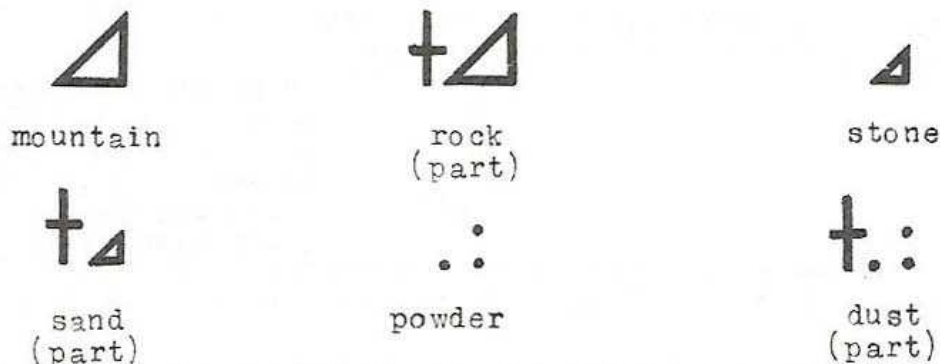
All these words refer to every day use, not taking into account that the geologist may consider the word sand appropriate only for SiO₂. We may now write the above mentioned words in symbols.

			
many, very many	mountain	range (many mountains)	massif (like the Alps, Andes, Rockies)
			
part	rock	boulder (2nd part)	stone (3rd part)

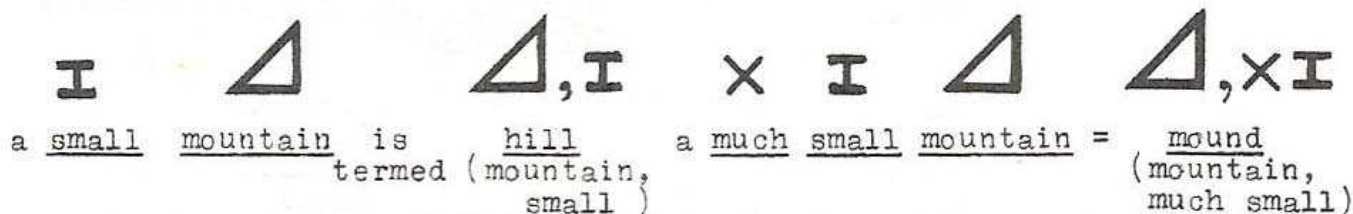
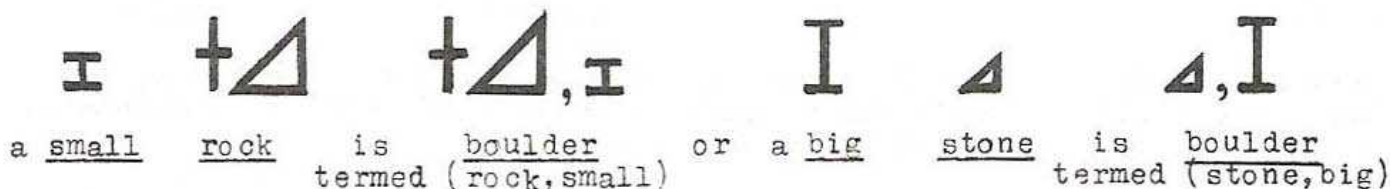
By placing a number before the part symbol we are doing a somewhat contrary operation to the mathematical operation of continued multiplication of a number, for instance $2^2 = 2 \times 2$; $2^3 = 2 \times 2 \times 2$; (power 2, power 3) If we continue in this manner, the symbol for dust would carry the number 6, indicating the 6th part of part of part of part.... This would not be practical, although simple. We may make a mistake in the numbers, although the harm done would not be great. The difference between a rock and a boulder, or between a boulder and a stone is not great.

To make the symbols more practical, which means: easier to remember, we may use the part symbol, not with high numbers (indicating parts of parts) and we may indicate smaller things by smaller symbols, if this is possible.

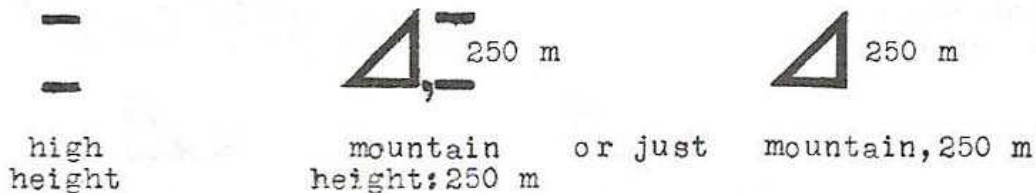
THE SYMBOLIZATION OF BIG, AND SMALL, AND MANY PARTS



We have left out the symbol for boulder; but we can express this meaning by using the symbols for big and small:



We know already that the words small, big, much, many are human evaluation words and very vague in meaning. We could end all arguments, whether a hill is a mound or a boulder a stone by employing mathematical measurements:



Here, for the first time, we have employed the comma (,) in compound symbols to separate the actual symbol mountain from the quality words (human evaluation words) big, small, much, etc. When we agree that the symbol we choose for mountain should indicate a piece of earth-crust thrust upwards over the horizon line, than we realize that all the words mentioned above like massif, range, hill, mound, rock, boulder, stone, powder, dust, etc. contain a human evaluation, vague in meaning. In fact we may argue whether a mountain group should be termed a massif or only a range, whether something is a hill or already a mountain. However, we will agree that all these terms refer to a piece of earth crust thrust up over the horizon line. For this meaning we have chosen our symbol.

These considerations play an important part in the new grammar of semantography and the reader is kindly asked to keep this in mind. We shall soon come to the chapters on grammar.

SEMANTOGRAPHY IN POSTAL COMMUNICATION

"The congress of Berne met in September 1874. The result of the congress was the signature of the first international postal convention, which has remained from 1875 to the present time, with comparatively little modification, the foundation of the international postal service.

The fundamental principle of the Union is contained in a striking article which lays down that for the purpose of postal communication the whole of the signatory countries form one single territory...

Thus each country has in effect the full and unrestricted use of the railway and steamship services of the whole world."

Encyclopaedia Britannica (25)

The following chapter is to be regarded as one example of the many possibilities of using symbol writing in our daily life.

One of the most important international activities are postal communication, and the nations of the world have found international co-operation in this field of so great importance, that they have done everything possible to foster this instrument of utmost practicability.

This co-operation goes so far, that two nations at war, determined to destroy each other, will co-operate in exchanging letter bags over some neutral frontier, where there is no fighting.

One might believe that all is well arranged in international postal communication and that there is no need for symbol writing. Yet, the yearly reports of the postal authorities of most countries show that millions upon millions of letters, and even parcels and money orders, are found impossible to deliver, because the sender has written an insufficient address or filled out wrongly a form. On closer examination we find that the poor people with little education are the sufferers because they have the greatest difficulties in reading and writing. But filling out forms is something which baffles sometimes the educated people. Remember how many times you yourself have been in doubt how to fill out a column of an official form. The heading of this column was perfectly clear to the official who designed the form, but many people just don't know what is meant.

The following symbols are a few examples of what can be done. The critic may kindly consider that these symbols appear in their specific context, that is: on a postal form and therefore all symbols refer in their meaning to postal communication. The International Postal Union may arrange that these symbols are printed together with the word in the native language, so that the population would understand the meaning and would then easily recognize the same symbols on any postal communication received from abroad.



letter
POST (in general)



cable
electric let.



wings



air mail
letter



money
(explanation
see page 248)





































money order



money cable



registered
letter

			
radio	radio cable	post card	stamp
			
stamp fee	cancellation seal	house	post office
			
enclosure	letter box	time	time of letter box clearance (out)
			
start	arrival	time(date) of sending off	time(date) of reception
			
sender	receiver ad	earth	address, place (indic.by pointer)
			
pen indic:writing	mouth indic:speaking	name	name & address
			
scale, weight	parcel	parcel weight	parcel fee
			
village (or town)	street	floor	number (international)
			
flag	state flag on territory	tree	country province

These are just a few examples; they intend to show that all terms in postal communication can be expressed by almost self-explanatory symbol. At present French is used on international postal forms, but ordinary people in the whole world, except on French territory, do not understand French. (a few educated people excepted).

No doubt, a traveller in a foreign country will appreciate these symbols, which he would recognize as the same he saw in his home country and which he would be able to read in his own language.

Even if he is unable to speak a single word of the language of the foreign country, in which he is travelling, he could make himself understood by writing a symbol on a piece of paper, say telegram office and a question mark (?). A native would immediately understand that the man is looking for the telegram office.

The benefits of these symbols would not be restricted to travellers and foreigners only. In every country, notably in the immigration countries, but also in Africa and Asia there are more than one language spoken. In some European countries exist two and even three official languages, but there are still some more spoken in those particular countries.

Moreover, every country has its illiterates. They would understand the symbols, because they, somehow, look like the real things.

Another practical application is shown below.

A N I N T E R N A T I O N A L A D D R E S S S C H E M E

As said before, millions of letters cannot be delivered, because the address is written wrongly or insufficiently. Besides the hardships which are caused to the sender and the addressee, an enormous amount of wasted effort and labour leads to the accumulation of huge piles of letters in the dead letter offices of every country. It amounts to many millions per year in most countries. But not only millions of letters do not arrive at their destination. Insufficient addresses are found also on parcels and money forms, etc.

Why do people write insufficient addresses? Why do they omit either the street or the number of the house, or the town, or the name of the state, or even the name of the addressee. Obviously some write in a hurry, some write absent-mindedly. But if there would be a guide, it would be difficult for them to overlook an item.

Such a guide form printed on every envelope in all countries would also remove a curse on letter delivery. Postal officials spent much time to find the name of the town, street, country, because there are great differences in regard of the sequence of writing the items. Some write the name of the street first and then the name of the town, some do it just the other way round. In some countries the name of the state is first, then the name of the town and the name of addressee is last. Addresses could be made uniform throughout the world by the following guide:



GRAMMAR

or

THE RULES OF THE GAME

WHY GRAMMAR AT ALL?

"Incomprehensible abstractions,pretentious,yet for the most part empty definitions,false rules,indigestible lists of forms,one has only to run over a few pages of any text book,to find variegated specimens of these sins against reason,truth,education"

These are strong words in which to condemn the bulk of modern grammatical teaching,but as we have seen...Professor Brunot,after fifteen years' work on linguistic analysis since their publication has found no reason to modify them...it is not surprising that the best informed philologist should feel that no words can be too strong for the grammatical fare on which the 20th century child is still nourished.

His final comment is:"A profound pity overcomes one thinking of the hundreds of thousands of children compelled to undergo an education composed of such aberrations."

C.K.Ogden and I.A.Richards (17)

Indeed - why grammar at all? There is the undeniable fact,that all the people of the world,with the exception of grammarians and grammar conscious intellectuals,talk and chatter away incessantly,without being aware in the least,what parts of speech they are juggling about or whether they use the perfect,the imperfect,or the pluperfect.Most people,thinking of their school experience in grammar,may feel a shudder cresping down their spine.Many reader may feel,that the success or doom of semantography stands and fall with the grammar it employs.If it is to be a complicated thing,similar to the grammar we learned in school,then good-bye and count me out!

No,it will be a totally different grammar, a new grammar,a grammar so simple,that everyone - after a little practice -should be able to grasp it. But a little grammar we need.

If this system of symbol writing is going to be taught to human beings, who should be able to read and write in it,we must give them a few simple rules of how to play the game, how to write words and sentences,so that they should be understood and read in all other languages.We know that the grammar of different languages in different parts of the world is very different.The grammar of semantography,however,must be valid everywhere over the whole earth,and in a rocketship on the way to the moon,and for that,even on the moon.It must be a universal grammar.

To devise such a grammar we have to employ Chemistry,Physics, Astronomy,Mathematics,Geometry,Biology and Psychology.But when we have devised the system,it must be so simple,that any boy and girl should be able to grasp it,and - like it.

To devise a new and simple,and even enjoyable grammar - this is a very difficult task,and the author will only succeed,if the reader is prepared to follow him and exert his utmost benevolence and understanding.

A UNIVERSAL GRAMMAR

FOR THE COMMON MAN

"An author who hopes to win recognition for new principles of language design has to overcome the superstitions of the sophisticated before he can hope to cash in on the common sense of the common man."

Lancelot Hogben (2)

In our world there are THINGS which we can touch. These THINGS move about. They perform ACTIONS. In our language we have words for THINGS and ACTIONS.

Our world consists of THINGS, which perform ACTIONS.

FOR THE SCHOOL BOY AND SCHOOL GIRL:

"I always took it for granted that the science of language, which is best known in this country by the name of comparative philology, is one of the physical sciences, and that therefore its method ought to be the same as that which has been followed with so much success in botany, geology, anatomy, and other branches of the study of nature."

Max Müller (52)

Our world consists of chemical THINGS, which we can touch. We can touch solid THINGS; we can touch liquids like water, and we can even touch gases like the air, which we feel as wind blowing into our faces. We can even touch the stars, or at least part of them, when they come down as a brilliantly lit meteor. The chemist analyses a meteor and finds that it contains the same chemical elements which we find on our earth. With spectroscopes and telescopes we can even analyse the far away stars and again we find the same chemical elements there, as on our earth, not only in the stones and rocks, but also in the flowers, in the bodies of animals and in the bodies of human beings.

All these are chemical THINGS, which exist in the SPACE, which forms our universe. We use words for these THINGS.

These chemical THINGS are moving about. They are performing ACTIONS. If a stone falls, the chemist may analyse the stone, but the physicist will analyse the fall, the ACTION performed in SPACE during a certain TIME. We use words for ACTIONS, SPACE and TIME.

Our world consists of chemical THINGS,

which perform physical ACTIONS

in SPACE and TIME.

FOR THE ATOM PHYSICIST:

"They class me as a quaker of sorts, and are puzzled as their fathers were by the fact that Sir Arthur Eddington, great as an astronomer, is a professed friend, that Faraday and Darwin were members of religious sects, and that the now somewhat forgotten Lucretian Irishman Tyndall, who startled the world at Belfast in 1874 by declaring that he saw in

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matter the promise and potence of all forms of life, is represented to-day by De Broglie, who scandalizes nobody by demonstrating what was plain enough to me in my teens: to wit, that if a dissolved salt can crystallize itself into a solid stone, it is as much alive as the nearest squalling baby."

George Bernard Shaw (53)

The division into THINGS and ACTIONS may seem antiquated in the light of present theories about electrons, protons, neutrons and the quantum theory. Eddington contemplated a table and asked if it is to be regarded as a solid matter or as a mad dance of electrons.

We need a practical system for our every-day life. And in our every-day life a table remains a table, a hard and solid THING, which we can move about. If we want to have its matter examined, we may send it to the chemist for a chemical analysis, and to the physicist for an analysis of its physical properties. This division into chemistry and physics - although long since abandoned in modern theory - is just a practical division for our every-day life.

Just as practical as the division in SPACE and TIME. In the light of present theories, they are a whole and physicists and mathematicians perform hair-raising operations, treating SPACE and TIME dimensions alike. But for practical purposes - if we give an order that our table should be delivered on the 7th July 1948, 4.30 p.m. to 5th Avenue, House 64, floor 10, room 1047 in New York -

- it would be very unwise, if we would not treat SPACE and TIME dimensions, as expressed in mathematical numbers, strictly and safely apart. Otherwise - utter confusion would be the result.

For practical every-day purposes (nuclear physics and the space-time continuum apart) we may formulate the first axiom of our universal grammar:

Chemical THINGS perform physical ACTIONS in SPACE and TIME

If we now proceed to give a name to each chemical THING and each physical ACTION, and if we define our SPACE and TIME notions by means of mathematical measurements, we arrive at a vocabulary of quite well defined entities, at least for practical purposes, and divided according to our new grammar into THING, ACTION, SPACE and TIME notions.

S Y M B O L S F O R T H E U N I V E R S A L G R A M M A R

"It was said that Prof. Peano carried the principle of grammatical economy to the extreme of niggardliness; it was also objected that Latino well suited to mathematics, would be too simple for more elusive themes.

Peano's demonstration, both practical and theoretical, is unanswerable: grammar, the torment of our childhood, is an exploded fallacy. Until we are educated up to this sensational discovery, we may retain as much of it as our weakness requires."

Albert Léon Guérard (20)

We now have to choose simple and effective symbols for chemical THINGS and physical ACTIONS. Here is our symbol for a



chemical THING

it looks similar to an Enclosure

and in fact every chemical THING is an enclosure in itself, of which we see only the surface. Within this "enclosure" there is the structure, consisting of molecules, atoms, electrons, protons, etc.

Moreover, the outline of our symbol for chemical THING is the outline of the most beautiful crystal structure, the cube, as we see it in the crystals of salt, gold, etc, which crystallize in the tesserall system. This symbol should remind us, that even those bits of inanimated earth crust are built up in a wonderful symmetrical order. Everyone, who has ever beheld such a beautiful crystal, may have felt, that at the basis of all THINGS in our universe is a clear geometrical simplicity, which we may truly call a divine order.

And now to a symbol for physical ACTION. We can depict it on a moving strip of celluloid, but even there, the picture will consist of many still pictures. Only by a deception of our eye, do we appear to see ACTION, when the filmstrip is projected.

But we can somehow depict ACTION by the result it produces. One of the primeval ACTIONS on our earth was the thrusting up of mountains. We can depict the outline of a newly born mountain, a volcano, the shape of which is a perfect cone. A part of its outline will form our symbol for



physical ACTION

The outline does not form a triangle. It is not an enclosure. It is something different from a chemical THING.

We have now our symbols for



chemical THING and physical ACTION

M A N, T H E C L A S S I F I C A T O R

"And out of the ground the LORD God formed every beast of the field, and every fowl of the air; and brought them unto Adam to see what he would call them: and whatsoever Adam called every living creature, that was the name thereof.

And Adam gave names to all cattle, and to the fowl of the air, and to every beast of the field.

Genesis, 2;19, 20.

Man invented words as names for the THINGS around him. He invented the words creature, male, female, biped, animal, quadruped, horse, etc.

Man invented words for ACTIONS like eating, drinking, going, etc.

If man had been able to classify as scientists now do, much would have been for the better. To a scientist a bug, or an octopus is not "ugly", but as much of interest as the most beautiful flower and the most lovable creature, and he classifies them with impartiality and gives names to them, equally impartial.

Adam, before the fall, did a good classification job. But afterwards, he started - against God's order - to classify everything into good and bad.

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Unfortunately, man did not behave like a scientist. He was not satisfied with classifying only. He felt, he must pass judgements on the THINGS and the ACTIONS.

And so he invented a third group of names, besides the two groups of names for THINGS and ACTIONS. Their meaning, however, is not found in nature. It does not exist in nature and it cannot be touched. No impartial apparatus can register it.

The third group has no real existence to which it can be referred. Its meanings originate only within man's brain, and these meanings differ within different brains.

Some prominent words of this group are beautiful, ugly, big, small, good, bad, right, wrong, etc. etc.

As said before, the meaning of these words differ in different brains. What one man consider beautiful, another may judge ugly. What one man says it's good, another may classify as bad. What one man declared to be right another condemned as wrong, and so on.

This third group created great misery throughout the ages of man's history. Scientists work hard to alleviate the miseries of man. One of their task is to reduce the influence of such words, in so far as they disturb human peace and happiness. And the first step is to make people become aware of these words, realize that their meaning differ in different brains, that on one can be absolutely right or absolutely wrong and that we must find another way than the present method of endless debates and ceaseless strife.

In semantography these words reveal themselves in geometrical lines. Semantography could therefore be of benefit to clear up misunderstandings and avoid senseless clashes.

As said before, the words pertaining to that third group do not refer to a real existence of their own in the outside world. They refer only to a sense reaction within our skin and these reactions are different within different skins.

We shall call that third group

HUMAN EVALUATION.

MAN THE ADJUDICATOR

HUMAN EVALUATION

"In the normal world we find the immemorial objects of man's attention: stars, sun, moon, clouds, water, earth, mountain and plain, trees and plants, rocks and metals, town, houses, animals, insects, and human beings. Things like these and their relation and behaviour are all that we find. The inventory contains no beings, no objects, corresponding to "justice", "democracy", "fascism", "capitalism" - no principles or essence of any kind. Beyond our skins are only things - moving, still, vital and less vital, changing, behaving. The "capitalisms" and "principles" are created in our heads by language and by language are objectified. The most powerful microscope cannot find them."

Stuart Chace (26)

"In King Alfred's time English adjective had eleven forms; now we have but one."

E. Sylvia Pankhurst (4)

Words pertaining to our class of HUMAN EVALUATION may also be termed

VALUES, QUALITIES, ATTRIBUTES, ADJECTIVES, ADVERBS

Now, it would be a hasty decision, if the reader would come to the conclusion, that this third group contains only words, which are termed adjectives and adverbs in conventional grammar, and that there is only a change of terms. No, there is more to it.

We must realize that some words pertaining to this group of HUMAN EVALUATION may under certain circumstances cause harm and human suffering, whereas those words solely pertaining to chemical THINGS and physical ACTIONS are mostly harmless in themselves. This will be explained at length in this and some following chapters. This new system is the basis of the semantical aspect of semantography, and the reader is kindly asked to withhold final judgement, until he has read this book to the end.

Let us suppose that this planet of ours has no human beings. Then all the THINGS will be there. The sun, the moon, the stars, the wind, the sea, the mountains, the flowers, the trees and the animals roaming through the forests and the plains. And all these THINGS will perform their natural ACTIONS. The sun will shine, the moon will cross the sky, the stars, the wind, the sea will do what they always do, the flowers will bloom and the animals will live and die, amongst the trees, which will grow and decay. An outside observer will need only the names of the THINGS and the names for their ACTIONS to describe this world.

Now comes man. He grasps this world with his senses. There is his skin, which comes into contact with the THINGS and feels them. There is his eye to see the things, there is his ear to hear, his palate to taste, his nose to smell, etc. etc. Above all there is his brain, the centre of his nervous system, which co-ordinates all the activities of all the organs, and moreover, makes him think, and express his thoughts in language.

The outside world will act upon his senses and his senses will react. These sense reactions are telegraphed to the brain and sooner or later man will find a word to express a special sense reaction.

What his skin will report, he will term hot and cold or lukewarm, or rough and smooth or velvety or stingy. What his eye will report, he will term white or black, or red, green, blue, pink or pinkish. The sense reaction of his ear will be termed, quiet, noisy, harmonious or not harmonious and so on with all the other sense reactions.

Now there is a biological truth that not two creatures are perfectly alike. Not two flowers are alike, not two insects or animals are perfectly alike, and we know that there do not exist two human beings who are exactly alike. Every human being is just a little different from any other human being, and this holds true, even for the most perfect twins, if we care to examine them carefully.

But then there are not two human brains exactly alike, and therefore the activities of this most wonderful of all the human organs will be just a little different in different individuals.

In other words: different individuals will have different sense reactions, they will evaluate impressions differently.

There is a flower, a chemical THING; its petals will reflect the light of the sun and our eyes will register a sense reaction. We label it red. But if one hundred persons look at the same flower, they may have just one hundred slightly different impressions, and we have no means whatsoever to ascertain whether two persons "see" the same shade of colour or not. On closer examination we may find that some persons have no colour impressions at all. They see no difference whatsoever between the red flower and the green leaves. Both have the same aspect, black or gray. But if some persons are totally colour blind, some other persons are partially colour blind and some persons are slightly colour blind. But even among the "normal" persons, there may be differences of impressions. When we show them flowers of different shades of red, we may be sure that flowers having the

same shade give them a similar impression, but we can't find out, whether this impression is exactly the same in two persons. Perhaps some hundred years later, we might be able to control and register and measure the complicated chemical and physical reactions which take place in the eye of the human being and on the way from the eye to the brain and in the brain itself, but right now, we are utterly ignorant of the processes which go on.

Similar considerations apply to all sense reactions. Some people may still hear some very low notes or some very high notes, whereas other people will register complete noiselessness. Some people will find no difference in two tones, slightly out of pitch, but some other people may shudder about the dissonance. We know that great musicians can distinguish the exact pitch of every tone they hear, whereas other people cannot.

But apart from sense reactions being different in different brains, there is another peculiar activity of our brain, which again differs in different brains.

One person may find a colour pleasant, whereas another person may find it unpleasant. One person may find a tune wonderful, another may find it horrible.

It is this peculiar activity of our brain, not only to register the sense reactions (coming from the different senses) in a different way by different individuals, but also to pass judgement upon them, to find them good or bad, nice or unpleasant, beautiful or ugly, right or wrong.

Even if we assume that two persons see a certain colour arrangement in exactly the same way, their eyes being perfectly equal (which is only a theoretical assumption), these two persons may pass a different judgement about the same colour arrangement.

The first person may find it an "eyesore", the other may term it "beautiful".

All the above words pleasant, unpleasant, wonderful, horrible, good, bad, nice, beautiful, ugly, right, wrong, eyesore, etc. etc. belong to the third group of words to which we have given the name of

H U M A N E V A L U A T I O N

All these words pertain to reactions of our very imperfect senses and our brain, and we know that not two human beings are alike and not too human brains are alike. We may now form one of the most important basical rules of the system of semantography:

THE MEANING OF WORDS PERTAINING TO HUMAN EVALUATION DIFFER IN DIFFERENT BRAINS, AND NOT TWO BRAINS ARE ALIKE.

We shall see later on, that there are exactly these words about which human beings come to blows. They are not only "adjectives". They comprise a wider range, and we shall learn how to find out whether they are meaningful or meaningless, and how we can reach agreement and avoid senseless debates and fights.

Let us find now a geometrical symbol which illustrates the precariousness of the meanings pertaining to HUMAN EVALUATION.

In our physics lesson we learned the difference between stability and lability by different positions of a cone.



stable
position



labile*
position

Footnote: According to Webster's dictionary (28), foremost meaning of labile = liable or prone to slip, err or lapse

If we place a cone in the stable position, it will stand stable. If we put it upside down in the labile position, it will instantly topple over. Only a juggler by a constant effort can maintain a cone in this precarious position and only a word juggler can maintain a precarious position in regard of some words pertaining to HUMAN EVALUATION.

This geometrical demonstration of the meaning of labile will be used to form our symbol for HUMAN EVALUATION.

However in the course of the coming chapters some other words may be used to indicate HUMAN EVALUATION in the wider sense. These words are QUALITY, VALUE or SENSE REACTION and they will be used alternatively in different particular cases to help understanding.

This then is our symbol for the third and last group of our universal grammar:



HUMAN EVALUATION
VALUE, QUALITY
(SENSE REACTION)

THE THREE GROUPS OF UNIVERSAL GRAMMAR
AND HOW THEY WORK TOGETHER



THING
ohemical



ACTION
physical



EVALUATION
human

FOR THE SIMPLE PEOPLE:

"Indeed most of us never realize the inherent irrationalities and obscurities of natural language until we begin to grapple with a foreign one. The discovery may then come as a shock, discouraging further effort."

F. Bodmer and L. Hogben (5)

Our world consists of THINGS which we can touch. Some THINGS perform ACTIONS sometimes, or we perform ACTIONS with some of them.

In our language we have many words for those THINGS, as for instance: man, woman, child, being, animal, horse, dog, table, hammer, etc.

We have also many words for the ACTIONS, as for instance: to ride, to eat, to speak, to run, to move, to hammer, etc.

Then there is a third group of words in our language, consisting mostly of QUALITY, VALUE words. A person may say: "a beautiful child", or "he rides beautifully". That person has made an EVALUATION of the child and of the riding. This EVALUATION is done with the brain.

Now there are not two human beings exactly alike and therefore not two human brains which are alike and which think alike. Consequently this HUMAN EVALUATION will differ with different persons.

One dish may be evaluated by one person as "tasty", and by another person as "horrible". A picture may be "beautiful" for one person, and "ugly" for another.

We see therefore, that sense reactions as pertaining to HUMAN EVALUATION are unreliable. Their meaning differ with different persons.

Then there are words in our language (and in all languages) which belong to two of the groups (THING and ACTION) and even to all three groups. For instance, the word rider refers to a human being, a THING, which performs the ACTION to ride. The word rider belongs to the THING and ACTION group.

The word wrongdoer or sinner belongs to all three groups. It refers to a human being, a THING, which performs certain ACTIONS, which people evaluate as "wrong". The word "wrong" is a HUMAN EVALUATION word.

The word to sin belongs to the group of ACTION and HUMAN EVALUATION. It refers to ACTIONS evaluated by people as "wrong".

Now we are perfectly sure that a wrongdoer is a THING, which we can touch, a human being. We are furthermore sure that this human being has done something, has performed some ACTION.

But we are not so sure about the EVALUATION "wrong". Was it something "morally wrong", or "legally wrong", or was he only "cruel", or "unkind" or "rude", or just "unpolite". All these words are HUMAN EVALUATION words.

We may receive a big shock, when we find that some other people are of quite a different opinion about that human being and his actions. They may consider his ACTION "right" and "not wrong at all". In their eyes he may become a "rightdoer", even a "hero".

You see already that words pertaining to HUMAN EVALUATION may cause great mischief and may lead to quarrel and fight and misery.

This new universal grammar will enable us to examine each words of our language, and determine whether it contains some HUMAN EVALUATION or not. If yes, we would have to be on our guard and do some further thinking.

Later on we shall learn how to eliminate HUMAN EVALUATION words and make our speech and our language reliable.

FOR THE SCHOOL BOY AND SCHOOL GIRL:

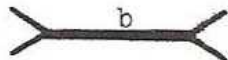
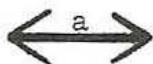
"What schools used to teach as English grammar was really an introduction to the idiosyncrasies of Latin. It was not concerned with the outstanding characteristics of the English language; and most educationists in America and England now condemn time wasted in the mental confusion resulting from trying to fit the tricks of our own terse idiom into this foreign mould. Without doubt learning grammar is not of much help to a person who wants to write modern English."

F. Bodmer and L. Hogben (5)

After reading the above paragraphs intended for simple people, we realize that the words of our language pertain to the three groups of chemical THINGS, physical ACTIONS and human EVALUATIONS. We realize too, that some words pertaining to human EVALUATION may cause arguments and heated debates, simply because their meaning differ with different individuals.

Learning the new universal grammar in school shall provide us with the means to identify such words, to make them harmless, or even disappear. Is this possible?

Let us contemplate the geometrical figures below:



Which line is longer, a or b ?

Which triangle has the greater surface ?

Now, we realize that the words long, short, great, large, small, little, etc are human EVALUATION words. On looking at the two lines a and b there may be some argument, which is the long line and which is the short line. There will be a difference of opinion with different people.

To find out the truth, we must employ a method which is impartial and independent of the evaluation of different people.

We employ a yardstick and measure. And we find that both lines a and b have the same length.

At once all arguments cease. But we realize that our senses have deceived us. Our eye has given us an imperfect impression and our brain has judged imperfectly.

We understand now why all words pertaining to HUMAN EVALUATION, pertain too to SENSE REACTION. HUMAN EVALUATION, as practiced by thought and speech follows from SENSE REACTION, which is different in different individuals.

Now to the second example. Which triangle has the larger surface?

Here even a yardstick will not help us to find the truth. We must know how to calculate the surface of triangles. The triangle with the longer sides may have the smaller surface. We must employ formulas and calculations. We must use mathematical science.

In the above examples we had a simple task. We had before us two lines and two triangles to compare. But usually we have only one thing in mind.

Is this bag heavy or light? Is the railway station far away or near? Is his room high or low. And there may be arguments about these human EVALUATION words. But we can make them disappear instantly, by stating mathematical measurements: This bag weighs 8 kg. Distance to the railway station is 1.5 km. Distance from floor to ceiling 4 m.

At once all arguments must cease.

Once we realize that all words pertaining to HUMAN EVALUATION are vague in meaning, we must strive to avoid them, to eliminate them by impartial measurements which are valid and indisputable for every observer.

This is what the universal grammar and semantography should teach us.

ALL WORDS OF OUR LANGUAGE PERTAIN TO CHEMICAL THINGS, PHYSICAL ACTIONS,
HUMAN EVALUATIONS AND IN ADDITION TO SPACE, TIME AND MATHEMATICAL NOTIONS.

The words line, triangle, circle pertain to SPACE notions;

The words hour, minute, second pertain to TIME notions;

The words one, two, three, four pertain to MATHEMATICS.

We have seen that the word wrongdoer refers to the three groups of THING, ACTION, and HUMAN EVALUATION.

In the same way the words high, low refer to SPACE and HUMAN EVALUATION.

The words early, late refer to TIME and HUMAN EVALUATION.

The words to add, to divide refer to ACTIONS and to MATHEMATICS.

Mathematics seems to be at the basical structure of everything. The Greeks of old understood by this word science in general and modern physicist, who explore nature do not hesitate to say that the Creator of this universe is a mathematician.

GRAMMAR

or

THE RULES OF THE GAME

WHY GRAMMAR AT ALL?

"Incomprehensible abstractions,pretentious,yet for the most part empty definitions,false rules,indigestible lists of forms,one has only to run over a few pages of any text book,to find variegated specimens of these sins against reason,truth,education"

These are strong words in which to condemn the bulk of modern grammatical teaching,but as we have seen...Professor Brunot,after fifteen years' work on linguistic analysis since their publication has found no reason to modify them...it is not surprising that the best informed philologist should feel that no words can be too strong for the grammatical fare on which the 20th century child is still nourished.

His final comment is:"A profound pity overcomes one thinking of the hundreds of thousands of children compelled to undergo an education composed of such aberrations."

C.K.Ogden and I.A.Richards (17)

Indeed - why grammar at all? There is the undeniable fact,that all the people of the world,with the exception of grammarians and grammar conscious intellectuals,talk and chatter away incessantly,without being aware in the least,what parts of speech they are juggling about or whether they use the perfect,the imperfect,or the pluperfect.Most people,thinking of their school experience in grammar,may feel a shudder creeping down their spine.Many reader may feel,that the success or doom of semantography stands and fall with the grammar it employs.If it is to be a complicated thing,similar to the grammar we learned in school,then good-bye and count me out!

No,it will be a totally different grammar,a new grammar,a grammar so simple,that everyone - after a little practice -should be able to grasp it. But a little grammar we need.

If this system of symbol writing is going to be taught to human beings,who should be able to read and write in it,we must give them a few simple rules of how to play the game,how to write words and sentences,so that they should be understood and read in all other languages.We know that the grammar of different languages in different parts of the world is very different.The grammar of semantography,however,must be valid everywhere over the whole earth,and in a rocketship on the way to the moon,and for that,even on the moon.It must be a universal grammar.

To devise such a grammar we have to employ Chemistry,Physics,Astronomy,Mathematics,Geometry,Biology and Psychology.But when we have devised the system,it must be so simple,that any boy and girl should be able to grasp it,and - like it.

To devise a new and simple,and even enjoyable grammar - this is a very difficult task,and the author will only succeed,if the reader is prepared to follow him and exert his utmost benevolence and understanding.

A UNIVERSAL GRAMMAR

FOR THE COMMON MAN

"An author who hopes to win recognition for new principles of language design has to overcome the superstitions of the sophisticated before he can hope to cash in on the common sense of the common man."

Lancelot Hogben (2)

In our world there are THINGS which we can touch. These THINGS move about. They perform ACTIONS. In our language we have words for THINGS and ACTIONS.

Our world consists of THINGS, which perform ACTIONS.

FOR THE SCHOOL BOY AND SCHOOL GIRL:

"I always took it for granted that the science of language, which is best known in this country by the name of comparative philology, is one of the physical sciences, and that therefore its method ought to be the same as that which has been followed with so much success in botany, geology, anatomy, and other branches of the study of nature."

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Our world consists of chemical THINGS, which we can touch. We can touch solid THINGS; we can touch liquids like water, and we can even touch gases like the air, which we feel as wind blowing into our faces. We can even touch the stars, or at least part of them, when they come down as a brilliantly lit meteor. The chemist analyses a meteor and finds that it contains the same chemical elements which we find on our earth. With spectroscopes and telescopes we can even analyse the far away stars and again we find the same chemical elements there, as on our earth, not only in the stones and rocks, but also in the flowers, in the bodies of animals and in the bodies of human beings.

All these are chemical THINGS, which exist in the SPACE, which forms our universe. We use words for these THINGS.

These chemical THINGS are moving about. They are performing ACTIONS. If a stone falls, the chemist may analyse the stone, but the physicist will analyse the fall, the ACTION performed in SPACE during a certain TIME. We use words for ACTIONS, SPACE and TIME.

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FOR THE ATOM PHYSICIST:

"They class me as a quaker of sorts, and are puzzled as their fathers were by the fact that Sir Arthur Eddington, great as an astronomer, is a professed friend, that Faraday and Darwin were members of religious sects, and that the now somewhat forgotten Lucretian Irishman Tyndall, who startled the world at Belfast in 1874 by declaring that he saw in

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matter the promise and potence of all forms of life, is represented to-day by De Broglie, who scandalizes nobody by demonstrating what was plain enough to me in my teens: to wit, that if a dissolved salt can crystallize itself into a solid stone, it is as much alive as the nearest squalling baby."

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The division into THINGS and ACTIONS may seem antiquated in the light of present theories about electrons, protons, neutrons and the quantum theory. Eddington contemplated a table and asked if it is to be regarded as a solid matter or as a mad dance of electrons.

We need a practical system for our every-day life. And in our every-day life a table remains a table, a hard and solid THING, which we can move about. If we want to have its matter examined, we may send it to the chemist for a chemical analysis, and to the physicist for an analysis of its physical properties. This division into chemistry and physics - although long since abandoned in modern theory - is just a practical division for our every-day life.

Just as practical as the division in SPACE and TIME. In the light of present theories, they are a whole and physicists and mathematicians perform hair-raising operations, treating SPACE and TIME dimensions alike. But for practical purposes - if we give an order that our table should be delivered on the 7th July 1948, 4.30 p.m. to 5th Avenue, House 64, floor 10, room 1047 in New York -

- it would be very unwise, if we would not treat SPACE and TIME dimensions, as expressed in mathematical numbers, strictly and safely apart. Otherwise - utter confusion would be the result.

For practical every-day purposes (nuclear physics and the space-time continuum apart) we may formulate the first axiom of our universal grammar:

Chemical THINGS perform physical ACTIONS in SPACE and TIME

If we now proceed to give a name to each chemical THING and each physical ACTION, and if we define our SPACE and TIME notions by means of mathematical measurements, we arrive at a vocabulary of quite well defined entities, at least for practical purposes, and divided according to our new grammar into THING, ACTION, SPACE and TIME notions.

S Y M B O L S F O R T H E U N I V E R S A L G R A M M A R

"It was said that Prof. Peano carried the principle of grammatical economy to the extreme of niggardliness; it was also objected that Latino well suited to mathematics, would be too simple for more elusive themes.

Peano's demonstration, both practical and theoretical, is unanswerable: grammar, the torment of our childhood, is an exploded fallacy. Until we are educated up to this sensational discovery, we may retain as much of it as our weakness requires."

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We now have to choose simple and effective symbols for chemical THINGS and physical ACTIONS. Here is our symbol for a



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it looks similar to an Enclosure

and in fact every chemical THING is an enclosure in itself, of which we see only the surface. Within this "enclosure" there is the structure, consisting of molecules, atoms, electrons, protons, etc.

Moreover, the outline of our symbol for chemical THING is the outline of the most beautiful crystal structure, the cube, as we see it in the crystals of salt, gold, etc, which crystallize in the tesseral system. This symbol should remind us, that even those bits of inanimated earth crust are built up in a wonderful symmetrical order. Everyone, who has ever beheld such a beautiful crystal, may have felt, that at the basis of all THINGS in our universe is a clear geometrical simplicity, which we may truly call a divine order.

And now to a symbol for physical ACTION. We can depict it on a moving strip of celluloid, but even there, the picture will consist of many still pictures. Only by a deception of our eye, do we appear to see ACTION, when the filmstrip is projected.

But we can somehow depict ACTION by the result it produces. One of the primeval ACTIONS on our earth was the thrusting up of mountains. We can depict the outline of a newly born mountain, a volcano, the shape of which is a perfect cone. A part of its outline will form our symbol for



physical ACTION

The outline does not form a triangle. It is not an enclosure. It is something different from a chemical THING.

We have now our symbols for



chemical THING and physical ACTION

M A N, T H E C L A S S I F I C A T O R

"And out of the ground the LORD God formed every beast of the field, and every fowl of the air; and brought them unto Adam to see what he would call them: and whatsoever Adam called every living creature, that was the name thereof.

And Adam gave names to all cattle, and to the fowl of the air, and to every beast of the field.

Genesis, 2; 19, 20.

Man invented words as names for the THINGS around him. He invented the words creature, male, female, biped, animal, quadruped, horse, etc.

Man invented words for ACTIONS like eating, drinking, going, etc.

If man had been able to classify as scientists now do, much would have been for the better. To a scientist a bug, or an octopus is not "ugly", but as much of interest as the most beautiful flower and the most lovable creature, and he classifies them with impartiality and gives names to them, equally impartial.

Adam, before the fall, did a good classification job. But afterwards, he started - against God's order - to classify everything into good and bad.

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Unfortunately, man did not behave like a scientist. He was not satisfied with classifying only. He felt, he must pass judgements on the THINGS and the ACTIONS.

And so he invented a third group of names, besides the two groups of names for THINGS and ACTIONS. Their meaning, however, is not found in nature. It does not exist in nature and it cannot be touched. No impartial apparatus can register it.

The third group has no real existence to which it can be referred. Its meanings originate only within man's brain, and these meanings differ within different brains.

Some prominent words of this group are beautiful, ugly, big, small, good, bad, right, wrong, etc. etc.

As said before, the meaning of these words differ in different brains. What one man consider beautiful, another may judge ugly. What one man says it's good, another may classify as bad. What one man declared to be right another condemned as wrong, and so on.

This third group created great misery throughout the ages of man's history. Scientists work hard to alleviate the miseries of man. One of their task is to reduce the influence of such words, in so far as they disturb human peace and happiness. And the first step is to make people become aware of these words, realize that their meaning differ in different brains, that on one can be absolutely right or absolutely wrong and that we must find another way than the present method of endless debates and ceaseless strife.

In semantography these words reveal themselves in geometrical lines. Semantography could therefore be of benefit to clear up misunderstandings and avoid senseless clashes.

As said before, the words pertaining to that third group do not refer to a real existence of their own in the outside world. They refer only to a sense reaction within our skin and these reactions are different within different skins.

We shall call that third group

HUMAN EVALUATION.

MAN THE ADJUDICATOR

HUMAN EVALUATION

"In the normal world we find the immemorial objects of man's attention: stars, sun, moon, clouds, water, earth, mountain and plain, trees and plants, rocks and metals, town, houses, animals, insects, and human beings. Things like these and their relation and behaviour are all that we find. The inventory contains no beings, no objects, corresponding to "justice", "democracy", "fascism", "capitalism" - no principles or essence of any kind. Beyond our skins are only things - moving, still, vital and less vital, changing, behaving. The "capitalisms" and "principles" are created in our heads by language and by language are objectified. The most powerful microscope cannot find them."

Stuart Chae (26)

"In King Alfred's time English adjective had eleven forms; now we have but one."

E. Sylvia Pankhurst (4)

Words pertaining to our class of HUMAN EVALUATION may also be termed

VALUES, QUALITIES, ATTRIBUTES, ADJECTIVES, ADVERBS

Now, it would be a hasty decision, if the reader would come to the conclusion, that this third group contains only words, which are termed adjectives and adverbs in conventional grammar, and that there is only a change of terms. No, there is more to it.

We must realize that some words pertaining to this group of HUMAN EVALUATION may under certain circumstances cause harm and human suffering, whereas those words solely pertaining to chemical THINGS and physical ACTIONS are mostly harmless in themselves. This will be explained at length in this and some following chapters. This new system is the basis of the semantical aspect of semantography, and the reader is kindly asked to withhold final judgement, until he has read this book to the end.

Let us suppose that this planet of ours has no human beings. Then all the THINGS will be there. The sun, the moon, the stars, the wind, the sea, the mountains, the flowers, the trees and the animals roaming through the forests and the plains. And all these THINGS will perform their natural ACTIONS. The sun will shine, the moon will cross the sky, the stars, the wind, the sea will do what they always do, the flowers will bloom and the animals will live and die, amongst the trees, which will grow and decay. An outside observer will need only the names of the THINGS and the names for their ACTIONS to describe this world.

Now comes man. He grasps this world with his senses. There is his skin, which comes into contact with the THINGS and feels them. There is his eye to see the things, there is his ear to hear, his palate to taste, his nose to smell, etc. etc. Above all there is his brain, the centre of his nervous system, which co-ordinates all the activities of all the organs, and moreover, makes him think, and express his thoughts in language.

The outside world will act upon his senses and his senses will react. These sense reactions are telegraphed to the brain and sooner or later man will find a word to express a special sense reaction.

What his skin will report, he will term hot and cold or lukewarm, or rough and smooth or velvety or stingy. What his eye will report, he will term white or black, or red, green, blue, pink or pinkish. The sense reaction of his ear will be termed, quiet, noisy, harmonious or not harmonious and so on with all the other sense reactions.

Now there is a biological truth that not two creatures are perfectly alike. Not two flowers are alike, not two insects or animals are perfectly alike, and we know that there do not exist two human beings who are exactly alike. Every human being is just a little different from any other human being, and this holds true, even for the most perfect twins, if we care to examine them carefully.

But then there are not two human brains exactly alike, and therefore the activities of this most wonderful of all the human organs will be just a little different in different individuals.

In other words: different individuals will have different sense reactions, they will evaluate impressions differently.

There is a flower, a chemical THING; its petals will reflect the light of the sun and our eyes will register a sense reaction. We label it red. But if one hundred persons look at the same flower, they may have just one hundred slightly different impressions, and we have no means whatsoever to ascertain whether two persons "see" the same shade of colour or not. On closer examination we may find that some persons have no colour impressions at all. They see no difference whatsoever between the red flower and the green leaves. Both have the same aspect, black or gray. But if some persons are totally colour blind, some other persons are partially colour blind and some persons are slightly colour blind. But even among the "normal" persons, there may be differences of impressions. When we show them flowers of different shades of red, we may be sure that flowers having the

same shade give them a similar impression, but we can't find out, whether this impression is exactly the same in two persons. Perhaps some hundred years later, we might be able to control and register and measure the complicated chemical and physical reactions which take place in the eye of the human being and on the way from the eye to the brain and in the brain itself, but right now, we are utterly ignorant of the processes which go on.

Similar considerations apply to all sense reactions. Some people may still hear some very low notes or some very high notes, whereas other people will register complete noiselessness. Some people will find no difference in two tones, slightly out of pitch, but some other people may shudder about the dissonance. We know that great musicians can distinguish the exact pitch of every tone they hear, whereas other people cannot.

But apart from sense reactions being different in different brains, there is another peculiar activity of our brain, which again differs in different brains.

One person may find a colour pleasant, whereas another person may find it unpleasant. One person may find a tune wonderful, another may find it horrible.

It is this peculiar activity of our brain, not only to register the sense reactions (coming from the different senses) in a different way by different individuals, but also to pass judgement upon them, to find them good or bad, nice or unpleasant, beautiful or ugly, right or wrong.

Even if we assume that two persons see a certain colour arrangement in exactly the same way, their eyes being perfectly equal (which is only a theoretical assumption), these two persons may pass a different judgement about the same colour arrangement.

The first person may find it an "eyesore", the other may term it "beautiful".

All the above words pleasant, unpleasant, wonderful, horrible, good, bad, nice, beautiful, ugly, right, wrong, eyesore, etc. etc. belong to the third group of words to which we have given the name of

HUMAN EVALUATION

All these words pertain to reactions of our very imperfect senses and our brain, and we know that not two human beings are alike and not too human brains are alike. We may now form one of the most important basical rules of the system of semantography:

THE MEANING OF WORDS PERTAINING TO HUMAN EVALUATION DIFFER IN DIFFERENT BRAINS, AND NOT TWO BRAINS ARE ALIKE.

We shall see later on, that there are exactly these words about which human beings come to blows. They are not only "adjectives". They comprise a wider range, and we shall learn how to find out whether they are meaningful or meaningless, and how we can reach agreement and avoid senseless debates and fights.

Let us find now a geometrical symbol which illustrates the precariousness of the meanings pertaining to HUMAN EVALUATION.

In our physics lesson we learned the difference between stability and lability by different positions of a cone.



stable position



labile* position

Footnote: According to Webster's dictionary (23), foremost meaning of labile = liable or prone to slip, err or lapse

If we place a cone in the stable position, it will stand stable. If we put it upside down in the labile position, it will instantly topple over. Only a juggler by a constant effort can maintain a cone in this precarious position and only a word juggler can maintain a precarious position in regard of some words pertaining to HUMAN EVALUATION.

This geometrical demonstration of the meaning of labile will be used to form our symbol for HUMAN EVALUATION.

However in the course of the coming chapters some other words may be used to indicate HUMAN EVALUATION in the wider sense. These words are QUALITY, VALUE or SENSE REACTION and they will be used alternatively in different particular cases to help understanding.

This then is our symbol for the third and last group of our universal grammar:



HUMAN EVALUATION
VALUE, QUALITY
(SENSE REACTION)



THE THREE GROUPS OF UNIVERSAL GRAMMAR
AND HOW THEY WORK TOGETHER



THING
chemical



ACTION
physical



EVALUATION
human

FOR THE SIMPLE PEOPLE:

"Indeed most of us never realize the inherent irrationalities and obscurities of natural language until we begin to grapple with a foreign one. The discovery may then come as a shock, discouraging further effort."

F. Bodmer and L. Hogben (5)

Our world consists of THINGS which we can touch. Some THINGS perform ACTIONS sometimes, or we perform ACTIONS with some of them.

In our language we have many words for those THINGS, as for instance: man, woman, child, being, animal, horse, dog, table, hammer, etc.

We have also many words for the ACTIONS, as for instance: to ride, to eat, to speak, to run, to move, to hammer, etc.

Then there is a third group of words in our language, consisting mostly of QUALITY, VALUE words. A person may say: "a beautiful child", or "he rides beautifully". That person has made an EVALUATION of the child and of the riding. This EVALUATION is done with the brain.

Now there are not two human beings exactly alike and therefore not two human brains which are alike and which think alike. Consequently this HUMAN EVALUATION will differ with different persons.

One dish may be evaluated by one person as "tasty", and by another person as "horrible". A picture may be "beautiful" for one person, and "ugly" for another.

We see therefore, that sense reactions as pertaining to HUMAN EVALUATION are unreliable. Their meaning differ with different persons.

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Then there are words in our language (and in all languages) which belong to two of the groups (THING and ACTION) and even to all three groups.

For instance, the word rider refers to a human being, a THING, which performs the ACTION to ride. The word rider belongs to the THING and ACTION group.

The word wrongdoer or sinner belongs to all three groups. It refers to a human being, a THING, which performs certain ACTIONS, which people evaluate as "wrong". The word "wrong" is a HUMAN EVALUATION word.

The word to sin belongs to the group of ACTION and HUMAN EVALUATION. It refers to ACTIONS evaluated by people as "wrong".

Now we are perfectly sure that a wrongdoer is a THING, which we can touch, a human being. We are furthermore sure that this human being has done something, has performed some ACTION.

But we are not so sure about the EVALUATION "wrong". Was it something "morally wrong", or "legally wrong", or was he only "cruel", or "unkind" or "rude", or just "unpolite". All these words are HUMAN EVALUATION words.

We may receive a big shock, when we find that some other people are of quite a different opinion about that human being and his actions. They may consider his ACTION "right" and "not wrong at all". In their eyes he may become a "rightdoer", even a "hero".

You see already that words pertaining to HUMAN EVALUATION may cause great mischief and may lead to quarrel and fight and misery.

This new universal grammar will enable us to examine each words of our language, and determine whether it contains some HUMAN EVALUATION or not. If yes, we would have to be on our guard and do some further thinking.

Later on we shall learn how to eliminate HUMAN EVALUATION words and make our speech and our language reliable.

FOR THE SCHOOL BOY AND SCHOOL GIRL:

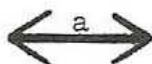
"What schools used to teach as English grammar was really an introduction to the idiosyncrasies of Latin. It was not concerned with the outstanding characteristics of the English language; and most educationists in America and England now condemn time wasted in the mental confusion resulting from trying to fit the tricks of our own terse idiom into this foreign mould. Without doubt learning grammar is not of much help to a person who wants to write modern English."

F. Bodmer and L. Hogben (5)

After reading the above paragraphs intended for simple people, we realize that the words of our language pertain to the three groups of chemical THINGS, physical ACTIONS and human EVALUATIONS. We realize too, that some words pertaining to human EVALUATION may cause arguments and heated debates, simply because their meaning differ with different individuals.

Learning the new universal grammar in school shall provide us with the means to identify such words, to make them harmless, or even disappear. Is this possible?

Let us contemplate the geometrical figures below:



Which line is longer, a or b ?

Which triangle has the greater surface ?

Now, we realize that the words long, short, great, large, small, little, etc are human EVALUATION words. On looking at the two lines a and b there may be some argument, which is the long line and which is the short line. There will be a difference of opinion with different people.

To find out the truth, we must employ a method which is impartial and independent of the evaluation of different people.

We employ a yardstick and measure. And we find that both lines a and b have the same length.

At once all arguments cease. But we realize that our senses have deceived us. Our eye has given us an imperfect impression and our brain has judged imperfectly.

We understand now why all words pertaining to HUMAN EVALUATION, pertain too to SENSE REACTION. HUMAN EVALUATION, as practiced by thought and speech follows from SENSE REACTION, which is different in different individuals.

Now to the second example. Which triangle has the larger surface?

Here even a yardstick will not help us to find the truth. We must know how to calculate the surface of triangles. The triangle with the longer sides may have the smaller surface. We must employ formulas and calculations. We must use mathematical science.

In the above examples we had a simple task. We had before us two lines and two triangles to compare. But usually we have only one thing in mind.

Is this bag heavy or light? Is the railway station far away or near? Is his room high or low. And there may be arguments about these human EVALUATION words. But we can make them disappear instantly, by stating mathematical measurements: This bag weighs 8 kg. Distance to the railway station is 1.5 km. Distance from floor to ceiling 4 m.

At once all arguments must cease.

Once we realize that all words pertaining to HUMAN EVALUATION are vague in meaning, we must strive to avoid them, to eliminate them by impartial measurements which are valid and indisputable for every observer.

This is what the universal grammar and semantography should teach us.

ALL WORDS OF OUR LANGUAGE PERTAIN TO CHEMICAL THINGS, PHYSICAL ACTIONS,
HUMAN EVALUATIONS AND IN ADDITION TO SPACE, TIME AND MATHEMATICAL NOTIONS.

The words line, triangle, circle pertain to SPACE notions;

The words hour, minute, second pertain to TIME notions;

The words one, two, three, four pertain to MATHEMATICS.

We have seen that the word wrongdoer refers to the three groups of THING, ACTION, and HUMAN EVALUATION.

In the same way the words high, low refer to SPACE and HUMAN EVALUATION.

The words early, late refer to TIME and HUMAN EVALUATION.

The words to add, to divide refer to ACTIONS and to MATHEMATICS.

Mathematics seems to be at the basical structure of everything. The Greeks of old understood by this word science in general and modern physicist, who explore nature do not hesitate to say that the Creator of this universe is a mathematician.

FOR THE INTELLECTUAL IN GENERAL:

"English grammar is not a body of set, unchangeable rules, but a description of English expression, bequeathed to us by our forefathers not to be piously preserved, but to be constantly used and adapted to our needs as they adapted it to their needs.

The English speaking people will strive unceasingly to find more convenient and more perfect forms of expression. It will do that as naturally as it breathes, and will continue to do it so that grammarians shall occasionally have to revise the school grammars."

George O. Curme (54)

From the two foregoing chapters it may become clear, that the universal grammar of semantography is not only a set of simplified rules of how to write sentences, so that people of different languages should write it conformingly.

It appears now that the universal grammar of semantography presents a system to discover words, which are vague in meaning, which are interpreted differently by different people and which are more than often the cause of quarrel and strife.

Not only "beautiful" and "ugly", "high" and "low" are HUMAN EVALUATION words. The words "democratic", "non-democratic", and "anti-democratic" fall in the same group. The peace of the world depends exactly whether we are able to teach the common man to interpret these words, giving them meanings which are valid for different observers.

The foregoing chapter has shown, that HUMAN EVALUATION words can be made harmless or even eliminated by employing scientific measurement. In the course of this book this method will be employed in various instances, including the meaning of "democratic". The reader is kindly asked to reserve judgement, until those chapters are handled.

If the reader is grammar-conscious, he may argue, that HUMAN EVALUATION words are nothing else than the "adjectives" and "adverbs" of conventional grammar. Although it is true that adjectives and adverbs fall in the group of HUMAN EVALUATION, there is more to it. We may take this opportunity to compare conventional grammar with the universal grammar of semantography.

In conventional grammar we distinguish between the following PARTS OF SPEECH: (1) noun, (2) pronoun, (3) verb, (4) adjective, (5) (5) adverb, (6) preposition, (7) conjunction, (8) interjection.

A word may fall in one or more of these classes, according to its use. Now we must realize that the knowledge of the intricate rules of grammar are not essential to good writing and good speaking. Many people who can write a good letter and can speak correctly, may fail miserably at a grammar examination. If grammar should be of practical use to everybody (and for this reason we learn it in school, but apparently it isn't of much use) there must be something in the system to blame.

Let us compare the above classification of parts of speech, with our new classification in chemical THINGS, physical ACTIONS and human EVALUATIONS.

NOUN: According to grammar definitions a noun is a name of a living or lifeless thing, for instance virtue.

Now, is virtue a lifeless thing? The chemist and the biologist will deny hotly that virtue could be classified as a "thing" without "life". It is apparently nothing of the sort.

Man, animal, flower, crystal, stone, virtue, beauty, are all nouns
But the beautiful, the beautification, the righteousness are nouns
too.

We see that the distinction: noun is too sweeping to be of any value. Almost anything can be a noun, the ins and outs, the pro and contra, the ohs and ahs!

The situation became worse, when some people invented the name of substantive for a noun. A substantive suggests some substance, something real, something you can weigh and measure. Thousands of books have been written about The Sublime, The Beauty. The same treatment has been given to The Good and The Evil and some of the most sinister persecutions in human history have been based upon this misleading grammatical classification.

In the universal grammar of semantography we use the classification of the chemical THING. Virtue, beauty, sublime, etc. are not to be found here. PRONOUN: I, you, he, she, it, we, you, they are pronouns and refer to real chemical THINGS, human beings, animals, flowers, stones, etc. These words fall in the group of chemical THINGS.

VERB: Here, the new grammar is in accordance with conventional grammar. A verb refers to a physical ACTION. We must however bear in mind, that a verb is sometimes used, where the physicist will be unable to observe any physical ACTION, as for instance the mountain towers. To tower may be termed a verb, but it should not be termed a physical ACTION.

ADJECTIVE: All adjectives like beautiful, virtuous, etc. fall in the class of HUMAN EVALUATION. However, we must bear in mind, that this group is wider in scope, as it embraces all words pertaining to SENSE REACTIONS. This will be explained more fully in later chapters.

ADVERB: This is actually the adjective of the verb: to appear beautifully, to live virtuously. These words too fall in the group of HUMAN EVALUATION.

PREPOSITION, CONJUNCTION: Words pertaining to these classifications are also called PARTICLES, like in, out, and, with, etc. It will be shown that they too fall either in the group of HUMAN EVALUATION or are "shorthand words" for chemical THINGS and physical ACTIONS. Such a classification may be frowned upon, but when we know that particles create "anarchy" (Bodmer-Hogben (5) and are one of the major causes of the difficulties in learning foreign languages, we may concede that a new approach is at least worthy of serious consideration.

INTERJECTIONS: Words like Ouch! Oh! Alas! Gosh! are outcries to express pain, surprise, anger, pleasure etc. all words pertaining to SENSE REACTIONS. They fall in the group of HUMAN EVALUATION.

The universal grammar of semantography has a most ambitious aim: to enable us to recognize the pitfalls and the consequent miseries brought upon mankind by language. This system may be a crude beginning only. But a new approach is necessary, should not the world go to pieces by propaganda.

FOR THE SCIENTIST:

"Whether we are studying a material object, a magnetic field, a geometrical figure or a duration of time, our scientific information is summed up in measures; neither the apparatus of measurement nor the mode of using it, suggests that there is anything essentially different in these problems".

Albert Einstein (26)

The universal grammar of semantography classifies all words in all languages as pertaining to chemical THINGS, physical ACTIONS, human EVALUATION, also to SPACE, TIME and MATHEMATICS.

Serious objection may be brought forward against this division. In the light of present theories a table may not be a chemical THING, but a physical ACTION, a mad dance of electrons, or oscillating wave fronts. We may face utter dilemma with many words. What is LIGHT? Corpuscles or

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or waves? What is GRAVITATION? A "force" or just "curved space" only? What is Time? What is LIFE?

Some hundreds of years ago people began to realize that they do not live on a flat earth. Instead they had to face the impossible conception that they are hanging upside-down on all sides of their globe, and may fall (where to: up or down?) at any moment.

Yet, humanity did not suffer a major nervous breakdown. People went on doing the practical thing: to live as they lived before. And it worked.

No matter how much new theories will turn our conception of the universe upside down, we may use the division into chemical THINGS and physical ACTION as a purely practical one for daily purposes in speech and thought.

We may invent an appropriate symbol to denote the meaning of LIGHT, of GRAVITATION, of TIME, of LIFE, although we know little or almost nothing about the real nature of these phenomena. When we are at a loss for an explanation we invent a word to cover up our ignorance. We observe a little cat, a mother for the first time, giving birth to kittens and performing all the necessary operations, including the cutting of the navel cord with an experience of a trained midwife or doctor; we marvel about it, but presto we invent a word INSTINCT and the miracle is explained and the puzzle solved.

This deception gets worse, because words once invented, begin a life of their own, and torn from their original concept are juggled about in similes, metaphors, and analogies. In semantography the symbol shows the outline of real things, thus maintaining a closer connection with nature than words in phonetic writing.

As to the division into HUMAN EVALUATION, scientists were precisely the men who invented the scientific method, who started to measure and who replaced vagueness by clearness.

We are aware that scientists endeavour to describe events in invariant formulas, independent of the different movements of different observers. We may find a similar conception in this universal grammar - although fitted only for practical use by ordinary people.

Words pertaining to HUMAN EVALUATION are apparently relative in meaning, different with different observers. Semantography should enable us to realize this and to eliminate and replace - wherever possible - such words by statements, invariant for different observers.

Far fetched as this may seem, scientists are of the opinion that the new notions as created by the modern theory of relativity are already revolutionising our thought and in due course will revolutionise our language.

As mentioned before, a book on the "Foundations of Mathematics" may be highly scientific. On the practical level however, it is something which can be handled by any housewife and any grocer.

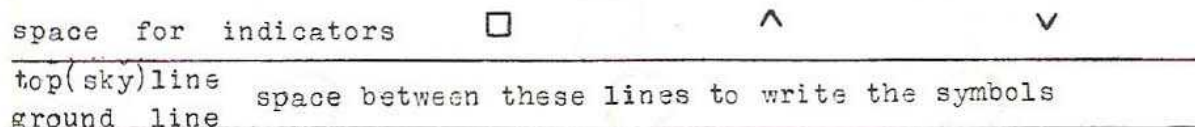
Similarly, semantography should be considered as a practical tool only, for practical purposes.

THE THREE LITTLE INDICATORS

"What is specially characteristic of Anglo-American is the large and growing group of words which can be verbs, nouns, or adjectives."

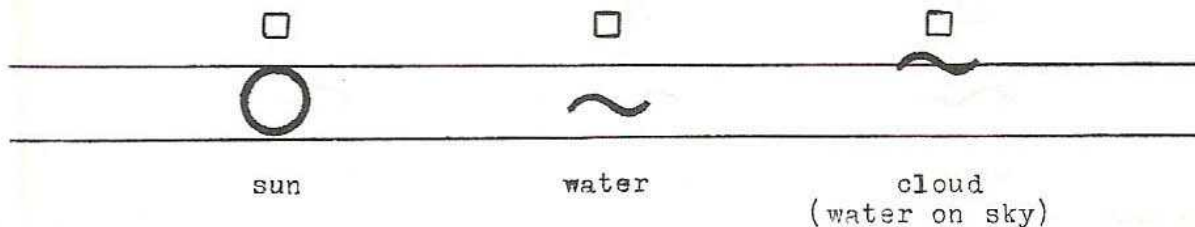
F. Bodmer and L. Hogben (5)

The three symbols for chemical THING, physical ACTION and human EVALUATION shall be used as indicators and written in smaller size above the top writing line.



indicators indicate THING ACTION VALUE

Let us now write three symbols for three THINGS

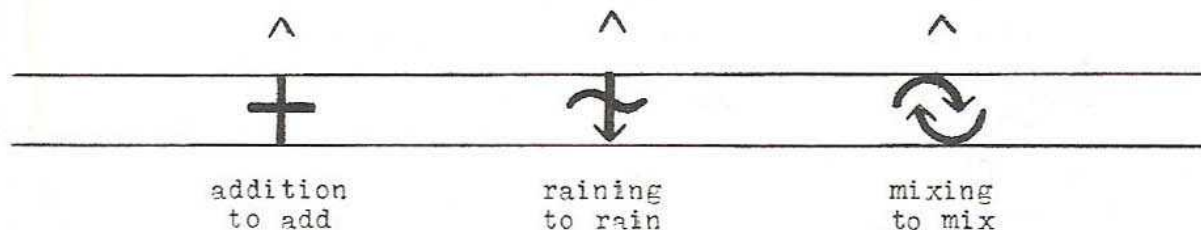


These are genuine chemical THINGS, and the symbols express therefore genuine THING words. They are genuine THING symbols.

Whenever we deal with genuine THING symbols, like the three above, we do not need to put the symbol for THING on top of them. In the foregoing chapters we have shown many genuine THING symbols, and the meaning was perfectly clear, without the THING symbol on top.

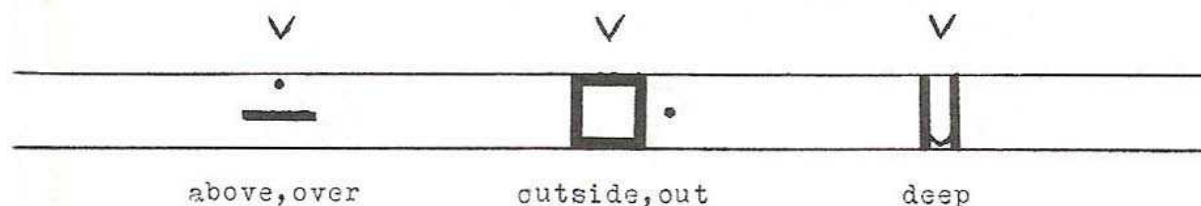
In text books for beginners, however, we shall put the indicator on top of every symbol, until the learner is acquainted with the symbols and has learned to distinguish between a genuine THING, ACTION or VALUE symbol.

Let us now write three genuine ACTION symbols.



In ordinary semantography writing we need not put the ACTION indicator on top of these genuine ACTION symbols. The arrow indicates ACTION anyway. The plus symbol indicates the mathematical operation (action).

And now three symbols from the last group: genuine VALUE symbols.



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Genuine symbols for THINGS are easiest to recognize. They show the outline of the real THINGS.

ACTION symbols are not so easy to recognize. We cannot depict ACTION in a frozen symbol. So we have to resort to some arbitrariness. The age-old international symbol of the arrow will help us to recognize genuine ACTION symbols.

VALUE symbols too, cannot easily be depicted. Simplest of all are VALUE symbols pertaining to SPACE, like above, outside, deep, because SPACE VALUES can be depicted in geometrical lines.

Why the fuss about genuine symbols for THING, ACTION, VALUE?

The answer is simple: the indicators can be exchanged to express all three meanings, and we should know what the original meaning is.

	□ 	^ 	v 
	sun	to sun, to shine sunning, shining	sunny
	□ 	^ 	v 
	water	to water watering	watery
sky line	□ 	^ 	v 
	cloud	to cloud clouding	cloudy
	□ 	^ 	v 
	addition the material THING added	addition to add, adding the ACTION	additionally
	□ 	^ 	v 
	rain the material THING <u>water</u> coming down	rain the ACTION	rainy
	□ 	^ 	v 
	mixture the THING mixed	to mix, mixing the ACTION	mixingly (for <u>mixed</u> see later chapter)



the material
THING above



to make or
become above
to put over



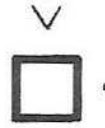
above
over



the material
THING outside



to make or
become outside
to oust



outside, out



the deep
abyss, chasm



to deepen
to make or
become deep



deep

Now, what we have done is nothing sensational. We have simply changed the meaning of a word from the "noun", into the verb and into the adjective. However, we have rejected the notion of the "noun" and installed instead the notion of the chemical THING, real matter. The word Depth is a noun too, but it may mean something different. We shall see later on how to handle such words.

For those reader who are versed in grammar, the above operations are childs play. For those, who may have some difficulty in recognizing the meaning of the three indicators, here is a simple scheme, how to remember their meaning, derived from the Latin words

Materia
Matter

Actus
a doing, Action

Valere
to be worth, Value

MATTER **^** ACTION **V**ALUE

We have drawn three examples of genuine THING symbols, genuine ACTION symbols and genuine VALUE symbols. Once we are well acquainted with them, we may dispense with putting the THING indicator (when we mean the THING) on top of the symbol, as it shows already the outline of a real THING. The same applies to the other two notions. An arrow in a symbol indicates an ACTION, so we do not need the ACTION indicator on top, and so on.

Sometimes however, we should put the indicator on top of the symbol in all three cases. The word open for instance is a VALUE word, but we have to draw the outline of a THING to denote it. To make sure what we mean, we must use the indicator in all three cases of THING, ACTION and VALUE.



opening

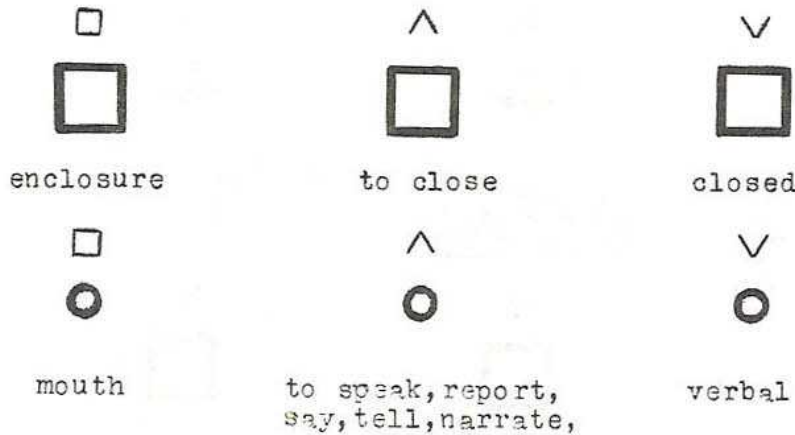


to open



open

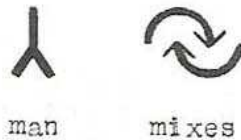
INDICATORS ARE NOT NEEDED IN MANY COMPOUND SYMBOLS



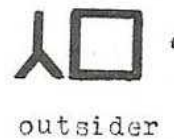
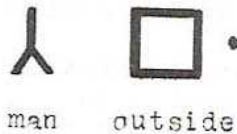
With the last symbol we have resorted to some arbitrariness, because the mouth performs also the ACTION to eat, to breath, etc. However, for our symbol writing, the most important ACTION of the mouth is to speak.

Later on, we shall see, that in very many cases, we shall not need any indicator, because the meaning shall become perfectly clear by the position of the symbols in the sentence, or by the combination of the symbols, as for instance

in a sentence



in a compound symbol



we see, we can dispense with the indicator, especially when the symbol is used in the original meaning. But an indicator is necessary if we want to say: man ousted and outcast.

Some reader may consider the division of the symbol for rain in the material THING: water coming down, and water in ACTION, artificial and unnecessary. They would be right. For ordinary purposes, the symbol for rain, without any indicator on top, will be perfectly sufficient.

The example rain was only chosen to show that we can interchange the indicator for THING and ACTION and thus obtain special meanings in each case. Let us assume that we have to write a report in semantography containing the following sentences: The rain contained red dust particles., or We found only two inches of rain in the tank. In both cases the real THING, the water is meant, not the ACTION. Both observations may have been made, long after the ACTION of raining has ceased. In such a case, we are justified to put the THING indicator on top of the symbol for rain.

But as said before, distinctions as such are not necessary, and may be used for beginners only. In "colloquial" semantography, the indicators should only be used in special cases, and the experienced writer will know when to use them, just as he knows how to avoid misunderstanding in ordinary writing.

MAKING THINGS PERFORM ACTIONS

"Like nature, the Chinese words are alive and plastic, because thing and action are not formally separated."

Ernest Femollosa (31)

In the foregoing chapter we have seen how to draw a symbol for a THING, then put the ACTION indicator on top and get the ACTION which this THING performs.

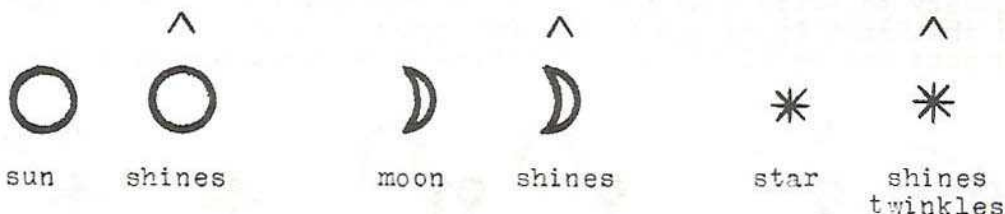
Now this simple procedure can be used throughout symbol writing. However, we must do a little thinking. It will be the thinking of the scientist, particularly the chemist, the physicist, and the biologist, but the other sciences will be used whenever necessary.

Let us take the sun. The sun performs a lot of different ACTIONS. Besides emitting light, he emits also heat, and other electro-magnetic waves. The sun rotates around the axis, the sun travels with the planets towards the constellation of Hercules; the sun does a lot of ACTIONS.

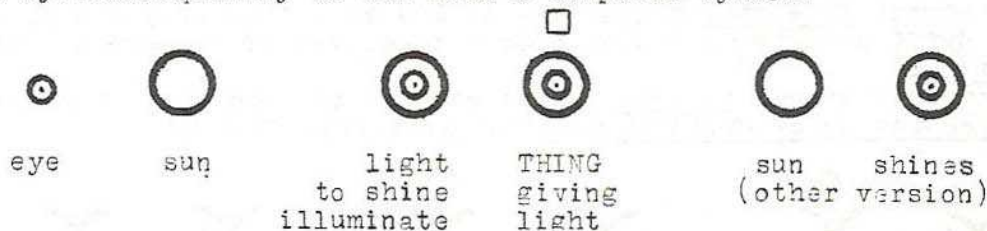
But for ordinary every-day language, the sun does the most important ACTION; the sun shines, and this should be denoted by our ACTION symbol.

But how about the moon and the stars. The moon shines too, and the stars do some twinkling. How to depict these ACTIONS.

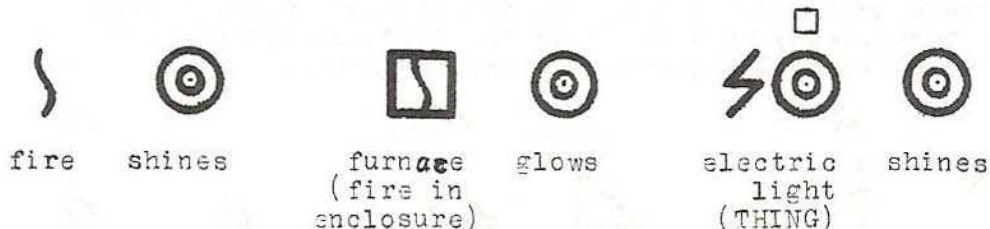
Well, we have to be consequent and consequently we shall write:



But we can invent a simple symbol to denote Light. Our primary source of light is the sun, and the sense organ which enables us to see light is the eye. Consequently we can form a compound symbol.



In a compound symbol the meaning is not a mere addition of the meanings of both basic symbols, but a new meaning arises. In this particular case the symbol means: light in general. Consequently we may use it, even in cases, where there is no sun involved in the actual light-giving.



We are entitled to consider the word light as indicating an ACTION (be it waves or corpuscles in action). Consequently we may omit the ACTION indicator.

THE THING INDICATOR IS NOT NEEDED ON THING SYMBOLS

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We can form other compound symbols to denote some ACTION, even if we are not so sure, which THING causes the ACTION: electrons, atoms, molecules?



sky electricity lightning lights-up ear thunder
(separate symbols) (symbol sentence) (separate symbols)

We could write now: lightning flashes and thunders. But if we use the ACTION indicator on top we denote with it all the ACTIONS which a lightning usually does: a flash of light, a thunder, a smell of ozone, and occasionally the striking of an object. Even this can be easily depicted.



lightning lightnings light- stri- house light- sets house
(symbol sentence) ning kes ning afire

A beginner in semantography after seeing the above short sentences a few times, will soon know what is meant, even if, later on, he sees them without an indicator. The position in the sentence tells the story.

Some readers, not trained in chemistry and physics may have become frightened at the idea, that the knowledge of chemistry and physics is necessary to write semantography. They may now have come to the conclusion that what is necessary is just common sense.

They need not be biologists either, to understand the following symbols:



flower - flowers flower grows tree trees (?)

We know what flowering means: the ACTION of a flower. We should not have any difficulty to guess what a tree does, even if we have not the verb to tree.

The compound symbol to grow can be used in its wider meaning, even for: growing up of children. They too, grow like flowers.



bird the doings wings to fly bird flies
of a bird to wing (symbol sentence)

Even if English has not the verbs to lightning, to tree, and to bird, we may assume that other languages have. In fact, natural languages contain many verbs, ready-made by using the THING word. However the meaning is quite often irregularly constructed, and exasperates the foreigner.



feather to feather mountain to mount stone to stone
(part of wing) ?????????? ?????????? ??????????

What do these verbs mean???

To feather should indicate the ACTION of a feather. But in English it means something entirely different. It means: to put feathers on, to feather a nest. But in French it means just the contrary: to pluck feathers, to take feathers out.

These meanings are not valid in semantography. When we want to express them in symbols we have to show: feathers put in or feathers taken out.

To mount does not indicate the ACTION of a mountain. In fact, there is no ACTION of a mountain (except landslides, earthquakes, volcanos, which have to be expressed with a second symbol denoting: going down, trembling, afire). In English to mount means to go up. To use the mountain symbol is impermissible for this meaning. We simply use the arrow pointing up.

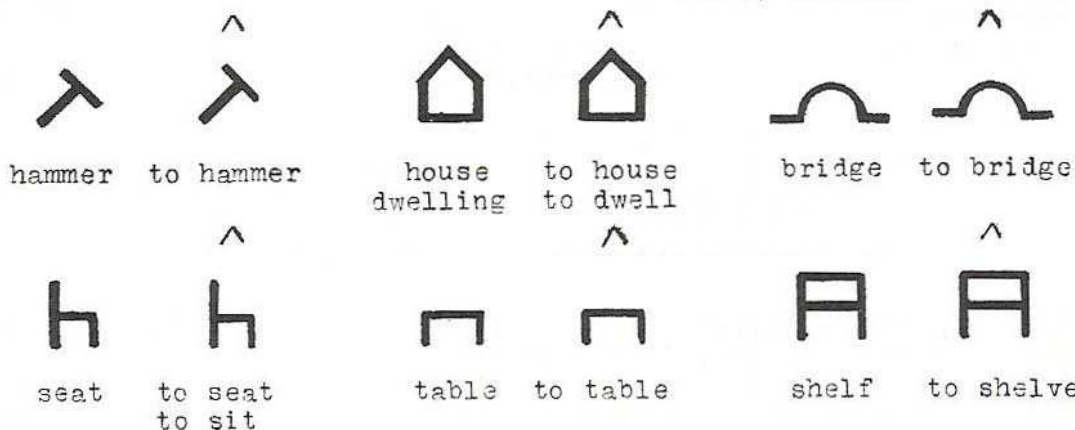
To stone does not indicate the ACTION of a stone. In English it means to throw stones on somebody. But stoned dates means dates from which the kernel has been taken out.

How would we write: mounting the stairs?



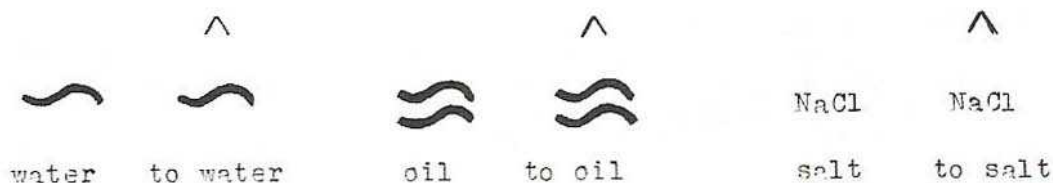
Now, we have reached THINGS which are man-made. Up till now we dealt with THINGS of our universe, lifeless or animated, which perform some ACTION, whether man is present or not.

Now we come to THINGS which man uses, and which he has made for use: tools in the widest sense. Here the verb is easily formed.



All tools designed by man to be used for a specific ACTION can be depicted in semantography by the outline, and the ACTION by putting the ACTION indicator on top of the symbol.

There is another group of THINGS, some found in nature in small quantities, so that man can handle them. The ACTION indicator should always mean: to put the THING on something else. To water means to put water on something else.



We shall see later on, that the symbol for water can be used to depict liquid in general. The symbol for oil depicts the well known phenomenon of oil floating on water. A symbol for salt would be simple, but NaCl is already internationally recognized.

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Then there are the human organs, which perform very important ACTIONS and of which we are going to hear more in coming chapters. Herebelow are only 3 examples of symbols.

○	^ ○	∩	^ ∩	∟	^ ∟
eye	to see	ear	to hear	nose	to smell

We may conclude this chapter by pointing to the indiscriminate way in which verbs are formed in natural languages; see the example given: to feather. In natural languages the situation is aggravated by the existence of homophones. This word means: two words having the same sound, like sun and son. Furthermore there are homographs, words having the same spelling and consequently the same sound: boarding a train, and boarding a tenant (providing him with meals). We must be on our guard when transferring meanings from natural language to semantography, as the following examples show:

ape.....to ape means to act like an ape in copying other people.
fish.....to fish, does not mean: to act like a fish, but to catch fish.
cow.....to cow, means to submit
cat.....to cat, means either to flog or to vomit.

These examples show, that we must observe the attitude of the scientist in drawing our ACTION symbol, as derived from the original THING. Most THINGS have a very definitive ACTION attributed to them, or we perform a very definitive ACTION with them.

If some special THINGS perform more than one important ACTION, we shall agree which ACTION should be understood in semantography. If somebody is in doubt, he may consult the semantographic dictionary.

But such words would be rare exemptions. The rule is one important ACTION to one THING.

THE RELATIVITY OF SPACE

"Surely, dear reader, as a boy or girl, you became acquainted with the imposing building of Euclidian geometry. Perhaps you remember with more respect than love that lofty edifice and its high flights of stairs over which conscientious specialists chased you up and down for innumerable hours.

With this past of yours you would surely punish everyone with utter contempt, who would dare to declare untrue even the most negligible postulate of this science. Yet, your feeling of proud positiveness would leave you instantly, if somebody would ask you: "What do you actually mean by your assertion that those postulates are true?"

Albert Einstein (55)

"The Einstein theory is indeed such a tremendous structural linguistic achievement that quite probably its full semantic significance and meanings will not be worked out for many years to come.

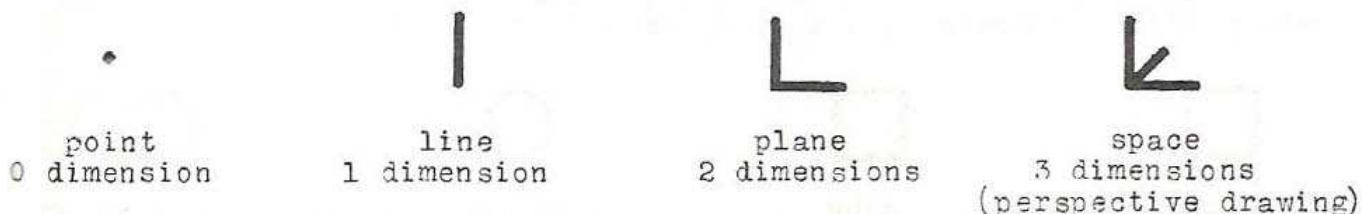
First, and above all, there are no possible "absolute" meanings to "space" and "time", beyond the relations established by measurements."

Alfred Korzybski (56)

"For every human being, the centre of the universe is he himself (or she herself). Regarding world events, every human being considers the life of one human being of little or no importance. However, this aspect changes suddenly, if it is the own life which is at stake."

Josef Popper-Lynkeus (57)

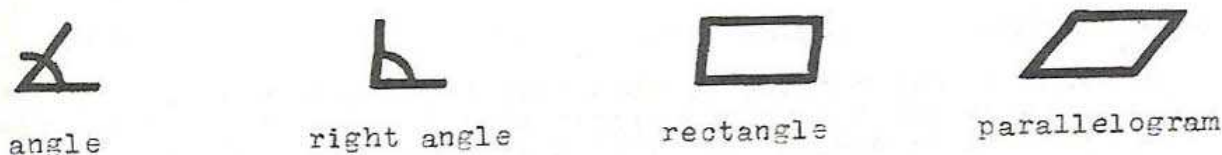
Before we study the semantical aspect of the relativity of SPACE in regard of all words pertaining to SPACE and HUMAN EVALUATION, we may handle the usual geometrical notions. Naturally, there is little difficulty to depict geometrically 2-dimensional notions, on our 2-dimensional writing pad. For symbols depicting 3-dimensional notions, we just have to get along as best as we can, sometimes resorting to a little arbitrariness to distinguish between two different notions, which may look similar on our 2-dimensional writing surface.



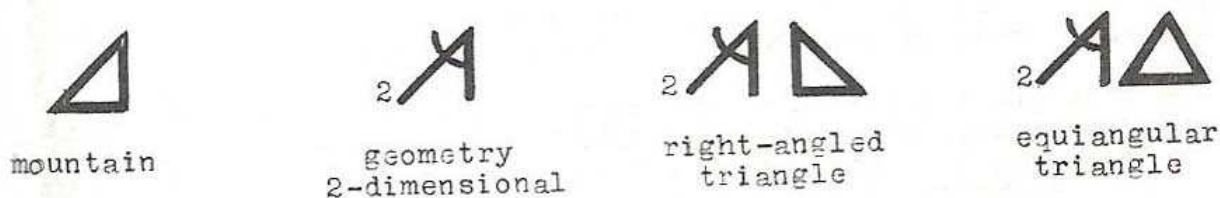
We have drawn the lines, termed as co-ordinates, and we thus arrived at a convenient symbol for SPACE. It is a perspective picture of the 3 co-ordinates standing at right angles to each other and forming the system of co-ordinates, or system of reference. This last term is going to play an important rôle with regard to HUMAN EVALUATION words.

The dot typed in the middle, means the geometrical point. Typed on the ground line it means the dot, which ends a sentence.

We can easily depict other 2-dimensional notions, as for instance

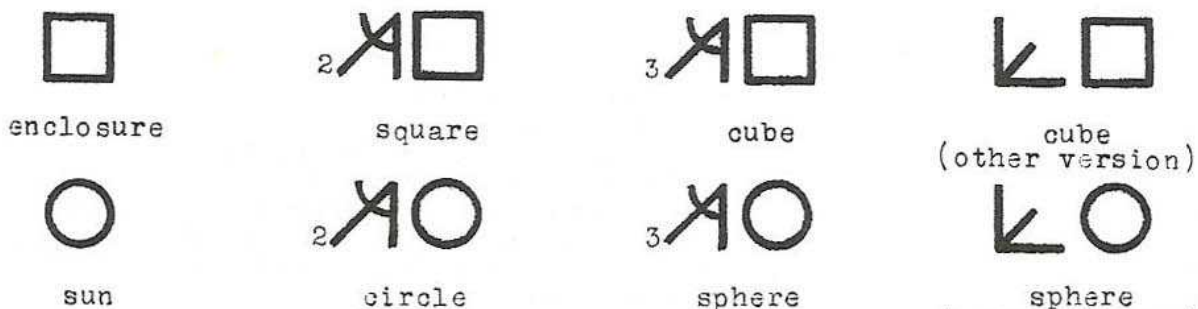


and so on with all the other notions, which are easily typable on our typewriter. However, we may have some difficulty, if we have already allotted a certain symbol to stand for something in our world. The triangle for instance, serves to indicate a mountain. But then, how to depict a triangle? In this case we have to add our symbol for geometry, previously shown (it looks like a pair of compasses) and we may add the number 2 to indicate 2-dimensional geometry.



If semantography is well established, and the risk of mistakes small, then we may agree that the triangle (sloping to the left) should denote a mountain, and the triangle (sloping to the right) should mean a triangle.

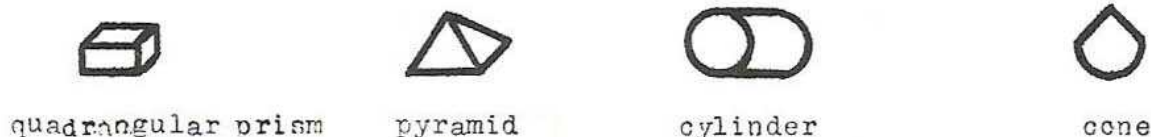
With other symbols we may proceed conformingly. Enclosure and sun, for instance, are very important symbols, recurring in many other important symbols.



But a third version is possible, by using the number 2 and 3 to indicate power 2 and power 3, as already used in geometry:

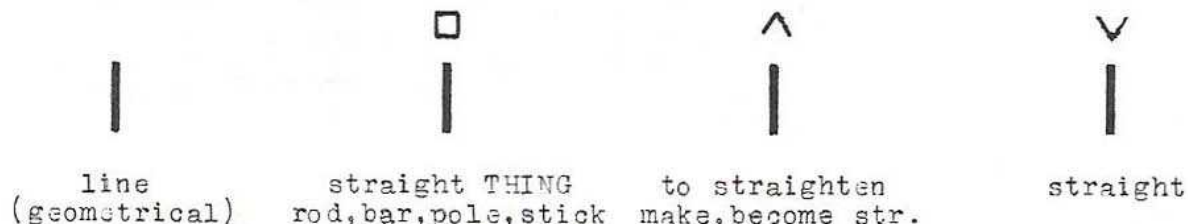


But our typewriter enables us to type even three dimensional forms in perspective



These examples may suffice to show, that it is possible to depict with few lines geometrical notions; also that the semantographic typewriter is capable to depict many THINGS used in industry and work.













Our division into chemical THINGS, physical ACTIONS and human EVALUATION works also with geometrical notions. as for instance:



We see that all three notions are derived from the adjective straight. As we have named this class HUMAN EVALUATION. it follows that the notion of a straight line is a conception out of our brain, a HUMAN EVALUATION.

Our school geometry conscience may revolt vehemently against this idea. Yet, it is precisely the modern theory of relativity, which has brought this to light, and it is interesting that our semantographic system, derived from grammatical classification of words, leads to an insight into the relative meanings of spatial relations. More about this later on.

Our symbol above, indicates a straight line. However, we have curved lines too in our every-day life.

			
curved line (geometrical)	curved THING curve (road) bow, etc.	to curve, to bend to make or become curved	curved bent
			
circle (geometrical)	circular THING disk, plate, etc.	to circle make, become c.	circular round (2 dim.)
			
sphere (geometrical)	spherical THING sphere, globe, ball	to rounden make, become r.	spherical round (3 dim.)

Now, we have all been to school; we have all learned to draw a straight line, and we have all learned to draw a circle. Moreover, we all have played with a nice rubber ball and we believe to know what a sphere "is". We have all learned the postulates of geometry, so admirably formulated by Euclid in the third century B.C. And we are honestly convinced, that these postulates are true, because we had ample proof of their truthfulness. We measured on our drawing board and found them true. We used a ruler at innumerable occasions and we have seen builders and craftsmen using all those postulates of geometry, and building houses which were straight, and vertical; we are using tools which incorporate the postulates of Euclidian geometry. Naturally, we may scorn the crazy idea of semantography, that the meanings of the words straight, circular, vertical, parallel are HUMAN EVALUATION words.

We may therefore be startled at Einstein's question (quoted at the beginning of this chapter): "What do you actually mean by your assertion that these postulates are true?"

In trying to find a correct answer, - in Einstein's own words - "our feeling of proud positiveness would leave us instantly", and we may even get more exasperated, when realizing, that according to semantography, the word true indicates a HUMAN EVALUATION.

This is not the place to propound the theory of relativity, so the reader must be content with the explanation in the following lines, which can only touch the subject and give the reader a glimpse only of the new aspect of SPACE, which he have gained.

Let us take the word straight. It should be clear what is meant, and we would not hesitate to demonstrate the meaning by taking a ruler and drawing a straight line. But - is it really and truthfully a straight line?

Under a microscope, our straight line would look not straight at all. It would be a ragged furrow. Even if we would use the finest and sharpest stylo, and draw the finest and most straightforward line, an even more powerful microscope would reveal our deception.

Then we realize that to draw a perfectly straight line on our drawing board, it must be perfectly flat (another HUMAN EVALUATION word). Is our drawing board perfectly flat? No, it isn't. And even a steel plate would not turn out absolutely flat under close examination.

The matter gets worse, if we try to draw a straight line on a surface much bigger than our drawing board; let us say: a straight line 100 meter long. We may build a perfectly straight tennis court surface, made from one piece of steel and perfectly grounded and polished and then draw a straight line. It would not be a straight line at all. It would follow the curvature of the earth.

But even if we take the curvature of the earth into account and build a straight and flat surface, somehow elevated at the ends, how would we know, that this plane is now perfectly flat and straight? All our rulers are man-made and not straight at all.

But a light beam is something straight. If we would send a sharp beam of light along our steel surface, and observe it on the other end with a precision theodolite telescope, then we would know whether the plane is perfectly straight and flat.

But does light go in a perfectly straight line? "No!" said Einstein. According to the theory of relativity a ray of light which skirts the surface of a celestial body should be bent. This was a most revolutionary thought and in 1919, the famous English astronomer Eddington set out to observe a total sun eclipse and to find out whether Einsteins prediction is justified. Einstein predicted that the position of a star, which would appear during the darkness of the sun's eclipse close to the sun's rim, would be shifted, and he gave the exact amount of the angular difference in mathematical numbers. Eddington found it correct, and from that date the theory of relativity became a world topic.

We could feel satisfied with the explanation that light consists, according to Newton, of tiny material corpuscles which are attracted by any celestial body, just as any stone is attracted by the earth. But observation prove that light is bent much more; and Einstein startled us by saying that a stone falls, not because it is under the force of gravitation, but because our space is non-Euclidian. Our space is "curved". We never can draw a straight line in this space, and we never can draw parallel lines. Stones fall, not because they are attracted; the earth and the planets circle around the sun, not because they are held by the sun's attraction, but because the space is curved, is warped somehow and the stone and the earth just can't help gliding along that spatial warpiness.

Now, this is giving us a serious headache, especially when we realize that the four dimensions always referred to in discussions on the theory of relativity are something different as we believed them to be: 3 space dimensions and 1 time dimension. In this case a fourth space dimension is meant. Space in the vicinity of matter (celestial bodies) becomes 4 dimensional, something incomprehensible for us human beings, because we can't imagine a fourth space dimension.

But in theory it can be done, and it was precisely Bernhard Riemann, who a century ago, evolved theoretically geometries for 4, or 5, or 6, or n dimensions. The geometry for a 3 dimensional space has been evolved by Euclid. Consequently geometries for a 4 or more dimensional space are termed non-Euclidian. And in such spaces a straight line is not straight at all.

Have you seen at fairs a dare-devil motocyclist racing along within a wire cage, which forms a sphere. He actually races along a "straight" line. He holds the handle bar as he would hold it, when racing along a straight highway. But for us, who observe him, we see that his straight line is actually a curved line, a circle, the greatest arc on a sphere, a meridian. The "world" of this motocyclist is "curved" and whenever he goes in a straight drive, he performs a meridian circle. If we imagine a very big spherical cage, say half a mile in diameter, and two motocyclist starting together in this cage to race straight and parallel to each other (everyone holding his handle bar straight), they would come nearer and nearer to each other in their meridian lines. No parallels here.

Now, as soon as you got this picture of the racing motocyclist in his curved world in your mind as an explanation, forget it. Forget even the term "curved space". It is a crutch only, to help our imagination and understanding. Our space is not "curved". It is 4-dimensional.

If this gives you a headache, because it is incomprehensible, just think that a similar headache is caused by the incomprehensible assumption that we are hanging upside-down - on all sides of our globe.

Well, is Euclidian geometry which we learned in school not true?

It's true, within limits. It works beautifully within small spaces, our drawing board for instance, and for practical purposes everywhere on our earth. Now, the words practical and purpose are both HUMAN EVALUATION words. From the point of view of human beings with their small purposes, the crude application of Euclidian geometry works perfectly.

However, some "impractical" astronomers have been worried since about a century about Mercurius, our smallest planet, next to the sun. Applying Euclidian geometry to its movement, they always found a difference between the calculation and the actual movement.

Einstein applied non-Euclidian, 4-dimensional Riemann geometry to the calculation and the difference disappeared. The space nearest to the sun with its great mass seems to be warped so strongly, that it affects our measurements.

The conclusion from all this is: geometrical relations within a certain space, depend on the masses present in this space. Mass alters space. Geometry becomes a part of physics.

If we want to make a statement, concerning the position of a table in a closed room, or if we want to describe an event happening in this room, for instance, the falling of a stone, we need to make statements of length, height and width with reference to the walls of this room, but we must also state where this room is situated: on the earth, or the moon, or in whatever gravitational field caused by other masses.

In other words: any statement, pertaining to space must be made with reference to a system of reference.

Now, we may learn a lot from these long-winded explanations, for the practical use of our language. We have seen that words pertaining to spatial relations belong to our class of HUMAN EVALUATION, and we shall see later on, that:

ALL WORDS PERTAINING TO HUMAN EVALUATION CAN NEVER BE CONSIDERED AS ABSOLUTE IN MEANING. IN EVERY CASE WE REFER TO A SYSTEM OF REFERENCE.

This system of reference is usually the human being who makes some statement, who judges something long, short, good, bad, democratic or not democratic. Another human being is another system of reference. Everyone draws the line between long and short, good and bad, democratic and not democratic. And everyone draws the line just a little different.

This line of reference is an important basical symbol of semantography. In simple words like above, below or their French counterparts au-dessus de, and au-dessous de we realise that we have to make some reference: above what?, below what?, but the line of reference is not visible in phonetic writing. It's different in semantography, and we shall see later on, that our geometrical symbols for good and bad, beautiful and ugly, democratic and not democratic contain visibly the system of reference in each case.

In this chapter, however, we shall deal only with spatial EVALUATIONS, the symbols for which are shown on the next pages.

THE IMPLICATIONS OF THE "LINE OF REFERENCE" SYMBOL

The line of reference is clearly seen in the following symbols which we learned already.



above, over
superior



below, under
inferior



before, in front



after, behind

Now, the quotation of the sociologist Popper-Lynkeus (at the beginning of this chapter) refers to the fact, that every human being considers himself (or herself) as the centre of the universe. He refers everything to himself. He himself is the line of reference. This is indicated by our symbol, which looks partly like the English I (Individual), partly like a human being, standing with legs close together, but above all, it shows the line of reference.



line



I
(individual)



self
(like "before" symbol)



other
(like "after" symb.)



right



left



superior
man



inferior
man

The words superior, and inferior have inflicted a lot of harm. We must realize that they refer to a HUMAN EVALUATION, different in different individuals, who is superior in what, when and where, depends upon the drawing of the line. Two individuals may draw the line differently.

Now to ordinary spatial meanings, indicated by lines.



long



short

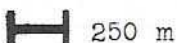


far



near

These symbols, as they stand can be used for "small talk". The engineer can make three of them disappear by writing the actual measurement. This gives us a new symbol:



length: 250 m
distance:



measurement
scale



ruler



to measure

In using a measurement, like above (250 m) we have made a statement about a distance, which is not more long or short, far or near. However we got a new symbol into the picture "m". What is m? It is the 1/10.000.000 part of the distance from the pole to the equator of our earth. In doing so, we have shifted the system of reference from the individual to our earth. This is an impartial system of reference, equal and valid for all individuals.

The following symbols are self-explanatory



wide



narrow

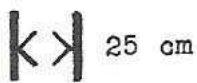









thick







thin

Again we can express the exact width or thickness:





 width: 25 cm inner distance	 thickness: 25 cm outer distance	 deep	 shallow
 high	 low	 big	 small

The last two symbols are somewhat arbitrary, because we refer to something 3 dimensional, like a big house, by judging its height only. Needless to say, that these two words big and small are more than many other words, only HUMAN EVALUATIONS, with no exact meaning.

To indicate parallel we just draw two parallel lines. But we need this symbol for a more important word, and therefore we shall use our symbol for geometry (the pair of compasses):

 parallel	 to repeat to copy	 THING repeated copy, repetition	 repeatedly
---	---	---	---

Extending the vertical parallel lines to the limits of our symbol square, we get the meanings of:





 limits in general	 limits frontiers, etc.	 to limit	 limited
---	--	--	--

We can use the symbol without indicator (as shown) if the context makes it clear what is meant.

 between	 together (plus)	 around	 vertical
--	---	--	---

and so on, with all the notions pertaining to SPACE. These examples should convince us, that it is possible to devise simple symbols, which should be valid in any language.

Now we are able to distinguish the meanings concerning our arrow symbol.

 the THING which moves forward, is "forwarded"	 moving forward	 forward direction only	 downward direction only
--	--	---	---

THE RELATIVITY OF THE HUMAN SENSE REACTIONS

LET'S COME TO OUR SENSES

"They received the use of the five operations of the Lord and in the sixth place he imparted them understanding, and in the seventh speech, an interpreter of the cogitations thereof."

Apocrypha: Ecclesiasticus, XVII.5.

According to popular distinction, we have seven senses: the usual five senses of vision, hearing, smell, taste, and touch, to which are added the faculties of speech and thought.

Now, we know that man has at least 20 senses or more, if we interpret the word as pertaining to some organ within us, which reacts with the world outside us. We have a sense for SPACE, which helps blind people to go around in their home, without bumping into anything. We have a sense for TIME, which often wakes us up, exactly a few minutes before the alarm clock is set to ring. We have a sense for equilibrium, etc. etc. Thank heavens, we have no "sense" for electromagnetic waves from about 10 - 5000 m. Imagine hearing all radio stations blaring in unison, penetrating all walls! But we have a very fine "sense" in our skin for wavelengths between 0.1 - 0.0004 mm, which produce the "sensation" of warmth. We have too, a very fine sense in our eye for electromagnetic waves of about 0.0004 - 0.0008 mm, which produce the "sensation" light, etc. etc.

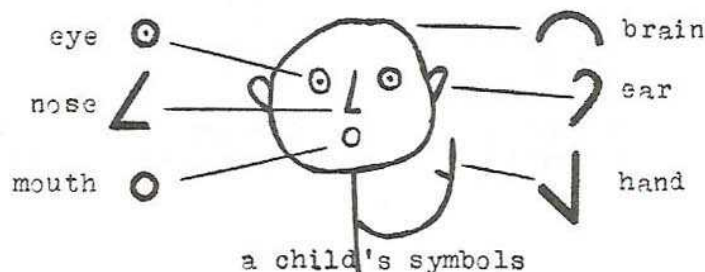
We have another - not so "sensitive" - sense in our ear for slow vibrations between 30 - 30,000 per second and we have very curious cells within our nose and our mouth which react chemically with other chemicals and give us the sensation of smell and taste. Other cells on our skin give us the sensation of touch, and so on with many other cells inside our body.

All these organs react with the outside world, and the sensations caused within us are the result of these SENSE REACTIONS. Our brain receives these SENSE REACTIONS and evaluates them. As two different brains will evaluate them somewhat differently, not two brains being exactly alike, we realize that SENSE REACTIONS, being HUMAN EVALUATIONS have only a relative value, valid only with reference to that brain alone which makes the EVALUATION.

Our organs register the outside world. Our organs are part of our body. Man was always very much interested in his body and in its reactions with the outside world. Naturally, a great portion of man's vocabulary contains words pertaining to these SENSE REACTIONS, which we have termed HUMAN EVALUATIONS.

Of course we have words which pertain to chemical THINGS as for instance eye, ear, nose, mouth, skin, hand, brain, etc. But as to the ACTIONS of these chemical THINGS, described by the verbs to see, to hear, to smell, to taste, to touch, to speak, to think, we must always bear in mind that these physical ACTIONS belong also to the class of HUMAN EVALUATION, and are different with different individuals.

In looking for appropriate and simple symbols we may examine the scribbling of children, not only because they will give us the most simplified symbols, but also because the scribbling of children reveal the first symbols of picture writing as practised by the caveman in the childhood of humanity.



V I S I O N





"Eyes speak all languages"

Emerson





















"These lovely lamps, these windows of the soul"

Du Bartas





In former chapter it has been pointed out, that indicators would not be used in "colloquial" semantography. Consequently the symbol of the eye standing without an indicator, should denote the most important meaning; vision, sight, seeing. If the meaning does not become clear through the word order in the sentences, we may use our three indicators.

			
vision, sight, seeing	eye	to see, seeing, to visualize,	visual

As explained in the foregoing paragraph, no indicator will be used in the following compound symbols.

			
awake (open)	asleep (closed)	dot	mark spot, blot
			
sun	light	opposite meaning	darkness dark
			
material THING	form, shape	through	clear transparent
			
rain	tear (THING) crying (ACTION)	to seem (it seems)	seemingly
			
THING on earth	find, discovery	enclosure	picture

The exclamation mark !! can be used to indicate a short, "exclamatory" sense reaction. If we make two or even three exclamation mark, we indicate more stress, as with yes! yes!! yes!!!

			
look	very attentive look, attention	watch (wide awake)	search attentive watch

Colour is a sense reaction, which the eye receives mostly from the things on earth. This combination will give us our symbol













			
eye	earth	colour	colour

We will choose the last symbol with the shortened earth line, because it looks better.




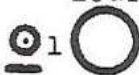
For ordinary every day purposes the seven colours of the rainbow and their mixtures would suffice to express a variety of colours. We may use the numbers, indicating the sequence in the spectrum

The colours of the rainbow

- (1) red
- (2) orange
- (3) yellow
- (4) green
- (5) blue
- (6) indigo
- (7) violet

			
colour	red	orange	yellow
			
green	blue	indigo	violet
			
black zero colour	white (sun)	minus subtraction	colourless minus colour

Using a comma (,) we can indicate colour mixture by writing two numbers, separated by a comma, to indicate a colour mixture of these two colours.

			
green-blue (green dominant)	blue-green (blue dominant)	brown red & black	pink red & white



near
(see p.150)



grey
(near black)

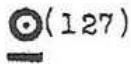


pale
(near white)

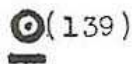


to pale
make, become p.

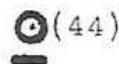
By using the little multiplication mark for much we can arrive at deep red (much red), etc., also to redder by using the ACTION indicator. If semantographic symbols would be used for international catalogues and all merchandise, involving exact colour definition, the well known colour chart may be brought "into the picture." Colours in the colour chart are classified according to numbers. See for instance the colour chart in Webster's New International Dictionary (28). By placing the colour number of the chart within brackets, we would indicate for the reader, that the numbers do not refer to the spectrum (rainbow), but to the colour chart, as for instance



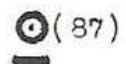
Carise



English vermilion



Khaki



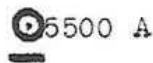
Persian blue

Colour symbols for industrial & commercial purposes
numbered according to the international colour chart

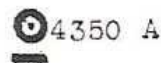
Scientists who are not satisfied with these arbitrary numbers, may refer to electromagnetic wavelength expressed in internationally recognized Angström units.



yellow



light green



blue



deep violet

Colour symbols expressed in spectroscopic Angström units

The last classification indicates a way to express a colour independent of the sensation of different observers. The sensation red is created within our skin. What is independent of our eye, is the wavelength of the electro-magnetic wave which produces this sensation.

The symbols using the 7 numbers for the rainbow colours, or the numbers of the international colour chart could be successfully employed in international catalogues on textiles, flower bulbs, paints, etc. etc.

The symbols shown in this chapter show only a few examples. We shall see later on, ^{that} many more words pertaining to visual SENSE REACTIONS and HUMAN EVALUATION respectively, could be expressed by using the symbol for the eye.

H E A R I N G

Within a bony labyrinthean cave
Reached by a pulse of the aerial wave
This sibyl, sweet, and mystic sense is found
Muse, that presides o'er all the powers of sound

Abraham Coles (58)

The outline of the ear, without the indicator on top gives us the general symbol for hearing, equal to the ACTION meaning, expressed by the ACTION indicator. This indicator, as well as the other two, we will put on only when necessary.



ear



to hear, hearing
to listen



or same meaning
without indicator



auditory, aural
acoustic

In combination with the symbol for earth from where most sounds come we could form our compound symbol for sound, which indicates actually a vibration of air molecules. We can use the exclamation mark.



earth



sound
noise



loud noise
(exclamatory)



bang, crash

We are at liberty to put in as many exclamation marks as we like - - !!!!! - to indicate a terrific bang or crack of an explosion. The basic meaning is: loud, sudden noise. 'Loud, and sudden are words of HUMAN EVALUATION, including the word noise, which refers to a SENSE REACTION.

Here are a few examples how we can employ the symbol of the ear.



listener



musical note



music



sonata

Just as Latin names are international in medicine, zoology, and botany, Italian terms are international in music and we may use them freely. But other musical terms taken from all languages are equally international as gavotte, menuett, tarantella, rumba, jazz, etc.



news
(see and hear)



book



paper leaf



newspaper

Other symbols will be shown in later chapters.

S M E L L A N D T A S T E

"I can make it...as plain as the nose on your face"

Erasmus



nose



to smell



olfactory

The ACTION of a smell is something different from a smell, which indicates certain molecules dispersed as vapour in air. This is actually a chemical THING. As all smells come from the earth, we shall again form our compound symbol from the symbol for earth and nose.



odor
smell



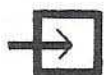
fragrance
enjoyable odor



mouth



breath



into



to inhale
to suck in



to exhale
to breath out



to cough
(exclamatory!!)

sky
line
ground
line



minus
without



breathless
without br.



sky



air

The reader, who objects to the arbitrariness of the symbol for air may consider, that air is invisible and therefore not depictable by any outline. We could, of course indicate air as a mixture of Oxygen and Nitrogen, expressed by the chemical symbols and a plus symbol.



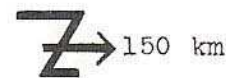
air
(N and O)



wind
(air moving)



hurricane
(much much wind)



wind at 150
km per hour

The mouth in combination with the symbol for earth should indicate all that the mouth receives from the earth, in particular: food.



food
(mouth & earth)



to feed, eat



to taste
(mouth, food, nose)



tasty
enjoyable taste

The formation of the compound symbol for taste by adding the symbol of the nose is vindicated by the fact, that all sense reactions of taste disappear, if one holds the nose tight. This is an old established practice when taking bad tasting medicine.

The symbol for food will lead us to the formation of many subsidiary symbols which may then be put into a list. Such a list of all kind of food may be hailed by travellers of all nations - a reform long overdue - an end to many disappointments and indigestions, a boon for international hotels and restaurants - an

INTERNATIONAL MENU CARD

readable in all languages

It will be explained in a later chapter.

T O U C H

"I perfectly feel, even at my finger's end."

John Heywood

The word feeling has different meanings. It refers first to the actions of what we call our soul, brain, or mind. Furthermore it refers to feelings within our body, as feelings of pain in the lungs for instance. At last it refers to the reactions of our skin, when coming into touch with other objects. As most of the body is usually covered by clothing, it is the hand, which does all the investigating feelings of this sort, and therefore we shall use the symbol of the hand to indicate the ACTION of touch.

However the hand does other ACTIONS too, the most important of which is to hold. This will be depicted by a compound symbol as will be shown later on.

The symbol for hand follows the Roman symbol for five V, the picture of the thumb and index finger:



hand



to touch



tactile

The exclamation mark may help to indicate short accentuated touches. The more exclamation marks, the heavier the touch!



slap



hit



blow



punch

Reporters on boxing bouts may agree on a list of hits, indicated by numbers of exclamation marks. But of course, it would say nothing about the real strength of a touch. All these words: slap, hit, blow, punch can be reduced to the meaning: heavy touch, very heavy touch or strong touch. Heavy and strong are HUMAN EVALUATION words. What is real is the ACTION.

At fairs there is a little machine where you can measure the strength of your touch, hit, blow, punch in mathematical figures,

A very important symbol, indicating tool, may be depicted by a schematized drawing of the very first tool which man invented, a tool which even gorillas and chimpanzees employ, a stone, a thing in hand

◻	⊕	⊕↑	⊕↷
THING	tool THING in hand	lifter (jack) tool f.apping	musical instrument

Other symbols employing the hand will be shown in later chapters.

S P E E C H

"When we advance a little into life, we find that the tongue of man creates nearly all the mischief in the world."

Paxton Hood

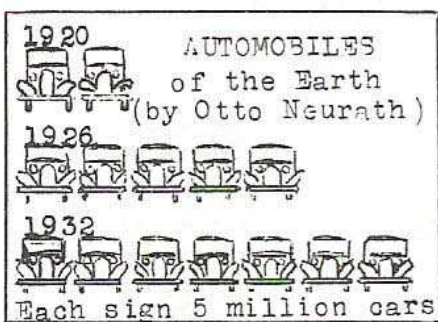
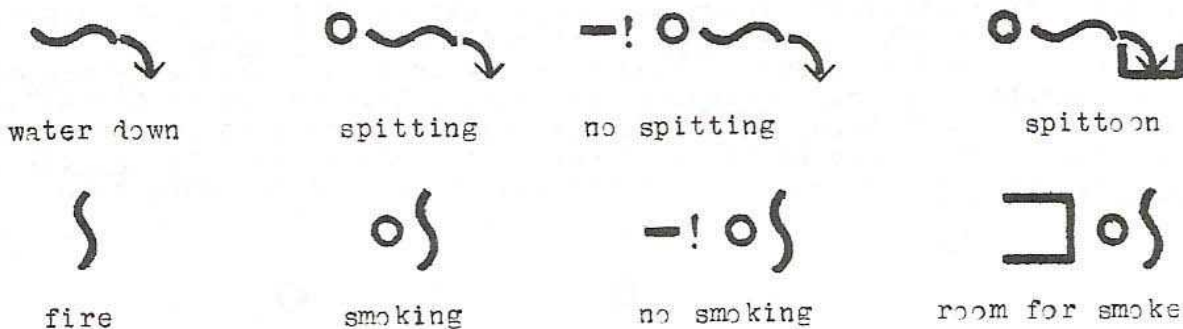
Man is equipped with a quite complicated organ, consisting of tongue, larynx, palate, teeth, lips, etc. which enables him to make a lot of noises, when he had better "keep his mouth shut" and "hold his tongue!"

A simple symbol is formed on our semantographic typewriter by typing a small circle, indicating mouth, the chemical THING and speech the ACTION of it. As words pertaining to speech play an important part in our vocabulary, this symbol will be used extensively. It should indicate speech, to speak, speaking etc. even without the use of the ACTION indicator.

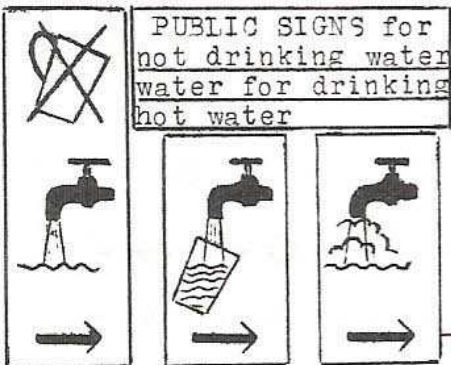
◻ ○	^ ○	∨ ○	
mouth	to speak, talk narrate, say report, tell	verbal, oral verbatim	
∧	∧○	⇌	○⇌
man	speaker	to and fro	discussion conversation
○!	○!!	○!!!	-○
cry	shout	yell	minus speech speechless
+	-	+!	-!
positive	negative	yes	no
○+!	○-!	→←	○→←
admittance	denial	meeting	greeting



In all the above examples the symbol for mouth, without any indicator, stands for speech, the ACTION. However the mouth symbol without indicator not indicating speech, may be used for special symbols, which would be easily understood, wherever they are seen. They are designed for public places.



Some readers may ask: "Why not real pictures for these public signs?" This has already been suggested by Otto Neurath, now chief-editor of the International Encyclopedia of Unified Science, Chicago Ill. He is the inventor of a new system for visual presentation of statistical data, which has been generally adopted. An example is shown on the left, in which Neurath's ISOTYPE (meaning: same type) signs, represent a certain amount of things, etc.



In 1936 Neurath published a small book (62) "International Picture Language". After explaining his method for statistics, he proposes the use of his schematized drawings for public signs (see example). However, he points out, that his ISOTYPE language is something different from the picture writing of the Chinese, which is a "complete language", whereas his method cannot be used to express a sentence word by word. Moreover the same sign, for instance a flame may represent different meanings in different statistics, as for instance heat produced, or destruction by fire, etc. These few words may suffice to show the difference as to semantography.

T H O U G H T

"Generation after generation, philosophy has been doomed to roll the stone uphill; and just as all the world swore it was at the top, down it has rolled to the bottom again...until now the weight and the number of those who refuse to be the prey of verbal mystification has begun to tell in practical life."

Thomas Huxley (26)

"Huxley's grandson Aldous, observes that philosophical arguments are mostly angry shoutings at one another by two people who use the same words but mean different things by them."

Stuart Chase (26)

The symbols pertaining to thought have been the most difficult to evolve. The coming chapters contain the result of 6 years of hard labour of inventing symbols, testing them and retesting them, rejecting them and replacing them by others, which again were tested and retested..The reader may reject them all, or he may get a glimmer of the difficulties involved.

Inventors of an international language had indeed an easy task. They took any dictionary at hand and just thought of some other sounds for words like devotion, belief, thought, suggestion, revelation, intellect, reason, deduction, decision, passion, emotion, morality, etc. etc. Their disciples in other lands then wrote dictionaries for their language, giving the equivalent of the Esperanto or Ido words in their languages.

But these words have not one meaning, but many. Moreover they have no definite meaning. Ten people will give you ten different versions of the meaning of belief, thought, revelation, reason, passion, morality, etc. etc.

With a symbol writing the task is much more difficult. In semantography no arbitrary lines are allowed to stand for arbitrary sounds like the sound p-a-s-s-i-o-n. The symbol must show an outline of a real thing, directly connected with the meaning. It must show - like a chemical formula - the inherent structure of the meaning, and the inherent danger, if the meaning carries that danger. The symbol must somehow give an explanation why the meaning is different with different individuals, why human thought differs so harshly.

In the end, the construction of the symbols must be in line with modern research - as much as possible - and it must take into account future development in psychological research.

This is a task of the first magnitude. The reader may reject the following chapters, or he may realize that semantography may mean a beginning to a system, teachable in the primary schools, which system may bring sanity where it is most needed - in our thought and in our speech.

However, some other readers may say; "Why all the trouble? This symbol writing is intended for short scientific reports in chemistry, physics, medicine, agriculture, etc. as well as for reports in industry, commerce and traffic. Why bother with all those "ideological" notions?"

True enough, we need international co-operation on a planetary scale in chemistry, medicine, agriculture, etc. But above all, we need international co-operation in education, which means international co-operation in psychology.

No doubt, the world today is "mad". If the human race should survive, *then* the teachers, the psychologists and the churchmen of all countries must co-operate. Every kindergarten and every Sunday school may be considered a potential research centre.

And research and new teaching must be co-ordinated. Even if there are different schools of thought, at least they should know what is going on in the other research centers, and how the problems are attacked there. But translations are most difficult. If there are fields where "verbal/mystifications" are let loose, they are the fields of philosophy, psychology, education, etc.

Semantography proposes a new system, which could bridge the language barrier. Moreover it seems to be a medium, in which the writer cannot indulge in heaping words upon words, which lead nowhere. It is a terse medium. It forces to simplicity. Instead of long-winded and vague talk - the vagueness of which is revealed in geometrical lines - it forces the writer to state facts: "If you do this, that will happen" or "I said this to 100 children, they reacted in the following way" etc.

And, last but not least, semantography may not be only a medium to write, it may in itself be an instrument for education. It may help to teach the future citizen in all countries how to recognize words with a definite meaning, and distinguish them from words which lead only to argument and strife and in the end nowhere.

Still, the danger that semantography may be condemned just on account of the following chapters is very great. On the other hand, they are the acid test of the whole system. Depicting things is easy - but

IF THOUGHTS AND IDEAS CAN BE DEPICTED BY SIMPLE SYMBOLS THAN SEMANTOGRAPHY MAY TAKE ITS PLACE AS AN INTERNATIONAL WRITING FOR THE MODERN NEEDS OF MODERN MAN.

WHAT IS THOUGHT?

"Thought can wing its way
Swifter than lightning flashes or the beam
That hastens on the pinions of the morn."

Percival

"The more we examine the mechanism of thought, the more we shall see that the automatic, unconscious action of the mind enters largely into all its processes. Our definite ideas are stepping stones; how we get from one to the other, we do not know; something carries us; we do not take the step."

Holmes

The brain, as an organ, composed of chemical matter, is acknowledged to be the centre for all impulses received from many other organs, like the eye, ear, nose, skin, etc, and in turn many organs act on impulses received from this centre. Different parts of the brain, have different tasks in regard of the different organs. Above all, there are myriads of cells, which have a special task: they "think".

How all this is done, we don't know. We have been able to measure certain electrical impulses in our nerves, we have been able to record so-called "brain pulsations", without knowing what they mean; we have been able to analyze chemically brain matter as to the content of Hydrogen, Oxygen, Nitrogen, Carbon, Phosphorus, etc. etc.; we have been able to make some statements about osmotic tension, colloidal dispersion, etc. etc. but how all this works together to produce a single thought - this we don't know. It seems, that we know more about what is going on on the sunlit part of the moon, than what is going on in our brain.

Do we know more about vision? Here is an impulse from the outside, something mysterious, which we call light, supposed to be waves, or particles, or both, we are not sure about it. Light affects our cells within our eye - we don't know how. These cells act chemically and physically with other cells within our brain - we don't know how. A "picture" is produced within our brain, which remains visible, even when we close our eyes, and which we are able to conjure up, even years afterwards - how all this is done, we have not the slightest idea.

We see that cells, animated by that greatest mystery, which we call life are able to register light. On the other hand, certain other cells are able to send out light. It may well be, that our "thought-cells" act similarly.

What then "is" thought? Is it too, produced by some outside impulse? A few hundred years ago, we did not know, what we know today. That light, heat, ultraviolet rays, radio waves, X-rays, ultra waves etc. are the same "thing" differing only in degrees. Some waves give us pleasant warmth, some startling brightness, some others burn us up, and again others have a deadly effect on our cells.

But then there are thoughts, which can do just the same. And human beings can emanate thoughts. What "is" hypnotism, telepathy, - how does all this work? According to modern science, light, heat, radio waves and X-rays, as well as the tiniest bit of matter up to the flaming stars, and the smallest living amoeba, up to the myriads of cells, which compose the body of a thinking human being - all this is a manifestation of waves or electrons, the tiny bricks, of which our universe is built. But then - thought and thinking must be a similar manifestation.

If "energy" can reach us from the depths of our universe and affect our cells, may be that brain cells are similarly affected. There are the great poets - most sensitive creatures of all of us - who have been able to say in a few words, what astronomers and scientists found out thousands of years later, to be facts. There are the great musicians, the great scientists, the great founders of religion. We should not be surprised, if men of science, modern researchers, should find out, that the words: the spirit pervades the universe are more than a phrase.

There is man, a product of this universe, a fragile composition of chemical molecules, and yet by some miraculous process, these molecule conglomerations, can see, can hear, can think and can create a new creature.

The "mechanists" of the 19th century set out to explain everything in a "natural" way. We have made great strides on this path, but today we know that the deeper we penetrate the mysteries around us, the more marvelous they become. Every "natural" explanation reveals a greater miracle. And one of the greatest miracles is human thought, the ability of certain of our cells to penetrate the depths of our universe and to ponder about this great design and its purpose.

We don't know how all this works, but we may take heart from other ventures. We have been able to alleviate human sufferings. We have been able to follow the universal law: to create order out of disorder. One day, we may know more about the process of thinking and then, we may be able perhaps to extinguish plagues of hatred and epidemics of destructive thought.

We must know more about the human soul. Modern psychology is a young science and one of its foremost pioneers is Sigmund Freud. His theory has been extremely fruitful and has advanced the knowledge of the causes of the suffering which befalls the human soul. Freud's teaching has inspired others to go forward in alleviating human suffering.

Freud's theory bears the mark of genius: it is basically simple. His division of the working of the human soul in Id, Ego, and Superego has been accepted by a wide range of scientists. Today surgeons operate on these notions. They have been able to cut out a portion of brain matter, belonging to that part which controls the Superego. By these operations, human beings, ravaged by an overbearing conscience and doomed, have been restored to health and sanity.

Freud's theory gives us three simple symbols.

I D, E G O, S U P E R E G O

"The Ego represents what we call reason and sanity, in contrast to the Id which contains the passions. All this falls into line with popular distinctions, which we are all familiar with...

If the Ego were merely a part of the Id that is...the representative in the mind of the real external world, we should have a simple state of things to deal with. But there is a further complication. Consideration...led us to assume the existing grade within the Ego, which may be called the Ego-Ideal or Super-Ego...

Behind the Ego-Ideal. .there lies hidden the first and most important of all, the identification with the father...

Sigmund Freud (59)

Ever and ever again human beings arise who understand what is meant by the fact that God is our Father...

There are no misunderstandings in nature; they are only to be found in the realms that man calls "understanding". Certainly "instinct" and "spirit" are beyond my understanding. They are terms that we allow to stand for powerful forces whose nature we don't know.

C.G.Jung (60)

The critical reader who subscribes to a particular brand of psychological theory is asked to understand that the primary motive of the author is the elaboration of a system of symbol writing which should be so simple that "everyone" can use it. Everyone means every human being, who has passed through a primary school education, who knows how to add, subtract, multiply and divide, or at least knows what these operation mean. A native of any tribe who wants to learn semantography, must learn at least the meaning of the symbols 1 2 3 4 5 6 7 8 9 0 - - x - = , . : ! ? " () etc. He does not need to know how to read and write alphabetical writing.

Primary school education (in the countries where this is universally given) is the basis of semantography, nothing higher up. No difficult mathematical symbols have been brought "into the picture", no log, no sin, no sec, no tan, no differential, no integral, no Hamiltonian function, and no Einsteinian tensor. But Hamilton and Einstein used the same primary mathematical operations, symbolized by + - x ÷ which we all learn in primary school.

The analogy which the author draws is this: long ago, before psychology became a science, man distinguished between the primary operations of the human "soul" and has given them names, which in their meaning are found in every language

- | | | | |
|----|--------------|-------------------------|----------------|
| | (1) emotions | (2) reason | (3) conscience |
| or | (1) passions | (2) rational
thought | (3) morality |

The list may be continued, but the reader, who knows already some bits of semantics, may understand that these are just words only "to stand for powerful forces whose nature we don't know" (Jung).

A glance into the books on contemporary psychology convinces us of the complexity of the problems, a complexity even more complicated by the use of words, which mean one thing to one psychologist and another thing to another. Hence the embittered fight among some of them. They use terms and everyone uses different terms. Sometimes two of them use the same term, for instance Ego, or Perception and understand it differently.

We can't go into that. Psychology is not yet taught in primary schools - unfortunately. I for one feel, that much of my suffering, as a child in school and as a boy in later years, would have been spared to me, if someone had explained it to me, just in the same way as mathematics was explained to me, when I was a child and a boy. The last chapter of this book contains long citations of a great psychiatrist, who advocates just this kind of education - if our race should survive.

Now, this chapter is devoted to the search for simple symbols for the three primary activities of the human soul, which are popularly divided into (1) emotion, (2) reason and (3) conscience. When we find that the father of modern psychology Sigmund Freud, made a similar division we should feel more secure, even knowing that the teachings of Freud are attacked and modified by others. No one doubts, not even Freud's enemies, that he is one of the great men of this century. He has penetrated the suffering human soul to a depth never attained before and the coming generations, healthier in body and mind, will have to thank him a great deal.

Now, here is a simplified explanation of Freud's terms, given in his own words. It is an extract from his writings, which extract avoids the complexity of the problem and may well be termed an oversimplification. But our primary concern should be: simple rules for a simple semantography.

"In every individual there is a coherent organisation of mental processes which we call his Ego" says Freud in his book THE EGO AND THE ID (translated by Joan Riviere in the "International Psycho-Analytical Library, published by Leonhard and Virginia Woolf and the Institute of Psycho-Analysis, London 1927)(59)

He dwells upon the complexity of all mental processes and upon man's total ignorance of the forces which govern our life and our thought. He cites another writer

"I am speaking of Georg Groddeck, who is never tired of pointing out that the conduct through life of what we call our Ego is essentially passive, and that, as he expresses it, we are 'lived' by unknown and uncontrollable forces."

In other words: we don't live (in the active form). IT lives us. We don't think. IT thinks us. The great philosopher Nietzsche has used the term IT already for "whatever in our nature is impersonal".

EGO is a Latin word, meaning I and the Latin counterpart for IT is ID, so Freud considers these terms simple and short, but he warns that they are to be treated as terms only, as symbols for something utterly complex and interwoven:

"I propose to take it into account, by calling the entity which starts out from a system of preconscious perception and begins by being preconscious, the Ego and by following Groddeck in giving to the other part of the mind into which this entity extends and which behaves as though it were Unconscious, the name of Id..."

Philosophers throughout the ages have made a similar distinction, which has been so generally accepted, that Freud calls it "popular":

"The Ego represents what we call reason and sanity, in contrast to the Id which contains the passions. All this falls into line with popular distinctions... at the same time, however, it is only to be regarded as holding good in an average or 'ideal' case."

To make himself clear, Freud reverts to a simple simile:

"The Ego in its relation to the Id is like a man on horseback, who has to hold in check the superior strength of the horse... The illustration may be carried further. Often a rider, if he is not to be parted from his horse, is obliged to guide it where it wants to go so in the same way the Ego constantly carries into action the wishes of the Id as if they were its own."

Now, let us put in a real illustration to illustrate the terms of Freud in a schematized way



Freud's Id, Ego, and Superego
in their relation to each other

(according to Alexander)

(By kind permission of the Australian Psychology Centre, Sydney)

This illustration should only help our understanding. It must not be taken in any way as an anatomical drawing. The circle represents (metaphorically) the whole of the human mind, encompassing all mental activities. The dark lower sphere constitutes the Unconscious, which gradually changes into the Preconscious sphere, which then culminates in the sphere (white) the Conscious.

We see at a glance that

"The Ego is a part of the Id, which has been specially modified."

In this symbolized drawing we may even discern the rider Ego on the powerful horse the Id, and we may think that in some people there is more of reason and less of passion, whereas in some other people passion is so powerful as to overthrow the little reason on many occasions. As H.G. Wells, once pointed out; only a few people think, the bulk of mankind is governed by passion and phantasy.

Now here is Freud's definition of his method, the much disputed Psycho-Analysis, which the psychoanalyst uses to help a patient to become conscious of what is going on in the unconscious part of his mind:

"Psycho-Analysis is an instrument to enable the Ego to push its conquest of the Id further still."

Even for this definition, Freud's picture of the rider and the horse serves to help our understanding.

But, of course, all this is not so simple as it looks, and Freud points out:

"...there is a further complication. Consideration... led us to assume the existing grade within the Ego, which may be called the Ego-Ideal or Super-Ego."

The drawing above shows, that there is no clear boundary between the Id and the Ego. They gradually merge into each other and we must never lose sight of the fact, that "the Ego is a part of the Id". But we see in the drawing another part of the Id, the Super-Ego. It reaches deep into the unconscious Id and emerges through the preconscious sphere into the Conscious. This part is popularly called conscience, morality, spirit, the laws of ethics within us, or God within us. Freud has invented a less assuming title, and calls it appropriately the Superego. As Ego stands for reason, the term Super-Ego stands for something super-imposed on our reasoning, a "higher" reasoning, a "higher" Ego, a Super-Ego. For a child it is the father and mother,

"Behind the...Ego-Ideal...there lies hidden the first and most important identification of all, the identification with the father...perhaps it would be safer to say "with the parents"

Now, this is a very simple indication of a complicated mental process and because Freud has adopted such a term, instead of the "popular" terms, conscience, morality, spirit, God, he has been most violently attacked - to his great astonishment. But we shall soon see that - for practical purposes - the terms Id, Ego, and Superego are admirably suited and should even be preferred by deeply religious people.

"If the differentiation we have made of the mind into Id, Ego, and Superego represents any advance in our knowledge, it ought to enable us to understand more thoroughly the dynamic relations within the mind and to describe them more clearly."

Freud's purpose was foremost practical: to help the mentally sick. He realized that modern medicine had practically no hope for those wretched people, who filled the asylums. He realized that he had to find a way to understand their misery, in order to help them. He saw men and women, who had committed no major "sin"; yet they were ravaged by an overbearing conscience, which tormented them incessantly and made every minute of day and night a hell for them. On the other hand, he found men and women, whose conscience and morals were obviously perverted. Only a hundred years ago those poor people were believed to be obsessed by the devil. They were put in chains, they were beaten to drive out the devil. Instead, the last flicker of sense was driven out of them. Today many of them are cured.

The term Superego has worked like a key to open, understand, and cure wretched souls, who suffered under obsessional neurosis, melancholia and other mental sicknesses. Today even surgeons have found Freud's terms practical and operate on them.

From the mentally sick, Freud turned to the mentally "sane". He found a mad world full of cruelty, prejudice, persecution, hypocrisy and hatred. The words conscience, morals, belief were obviously a mockery. People persecuted and killed other people with a "clear conscience" and in the "belief" that they were "right" and often they cried aloud that God too was on their side. It made no sense at all.

Young children are innocent of prejudice. But when they grow up, prejudices are instilled in their mind. By whom?

Young children are innocent of hatred. But when they grow up, hatred is instilled in their mind. By whom?

Some children are fortunate to have wise parents who do educate properly. But other parents do not or have not the time to influence their children in the ethical ways of living. So these children turn to parent substitutes, their leaders, their heroes, the detectives and the gangsters, and when they grow up, to their political leaders and writers, who provide them with a ready-made pattern of how to feel and how to think about this and that, and how to have a clear conscience, even when it means committing the worst atrocities.

Would it not be better to withdraw the words conscience, morals, belief which have been battered to almost meaningless symbols and reserve them for the "higher" meaning, for which they have been invented? Would it not be better to realize that this is a sick world, with sick people, having sick minds? Would it not be better to use a pure medical term Super-Ego to name that part of the mind in which are stored up all the influences from other minds, from parents, teachers, churchmen, poets, uncles, aunts, friends, but unfortunately also from pulp magazine writers, "comic" strip designers, führers, and political heroes?

The assumption of such a term Superego works like a practical gadget. It does not really "explain" anything, but it helps us to understand, why the minds of many people are perverted and full of cruelty, hatred, lust for persecution, killing and destruction. There is a portion of our brain matter, which seems to be influenced by other minds in a "good" or "bad" way. In the words of Freud:

"As a child grows up the office of the father is carried on by masters and others in authority;...their injunction and prohibitions...continue, in the form of conscience, to exercise the censorship of morals."

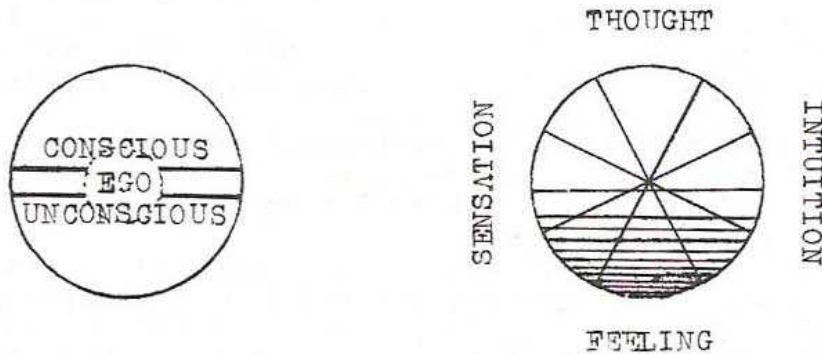
"Where then is God?" the religious man would ask. The answer for him is simple: "God is everywhere. In every cell of our brain, as well as of the whole body and in every molecule of every crystal."

If you term yourself an atheist, just supplant the word "God" in the above statement by some other word: "life principle", "purposive force", "energy", "matter", "space-time continuum", but don't think, that you have "explained" anything, or that you "know" more.

The great psychologist C.G. Jung worked for many years in close co-operation with Freud, and accepted most of Freud's findings. He then broke away from Freud and founded his own psychological school and system, which he termed "Analytical Psychology" in contrast to Freud's "Psycho-Analysis"

Both terms have exactly the same meaning and this turn-about of the same terms reminds us strangely of the political arena, where a group breaks away from the "National Democrats" to form the "Democratic Nationalists" which then take up the fight against the others - mostly with words.

Let us have a look at a similar graphical demonstration (as that on page 166) showing the terms on which C.G. Jung lectures. Needless to say that these drawings too, are an oversimplification of a very complicated subject.



Some of Jung's terms

(from "The Psychology of C.G. Jung" by Dr. Jolan Jacoby) (61)

In the left drawing we see the division of the mind in an Unconscious and a Conscious sphere. In so far, we have a similar representation as to Freud's Id and Ego, although Jung understands the term Ego somewhat differently. In the drawing on the right, we see a further deviation from Freud. The horizontal lines which grow thicker and thicker at the lower part of the circle, represent the Unconscious in contrast to the Conscious indicated by the bright upper part. For the Unconscious, Jung chose the term FEELING in contrast to the Conscious, which he terms THOUGHT.

Even this is in line with Freud's terms Id and Ego and with "popular distinction". But now Jung brings two other "opposites" into the picture which he terms INTUITION and SENSATION. We may now guess that the part of INTUITION comes somewhat near to Freud's Superego. What, however, means SENSATION?

If the reader would try to give a definition of SENSATION, he may be rest assured that 100 readers would give 100 different definitions. Freud has his definition, and Jung has his, and all the other psychologists have their special definitions. These words have very relative meanings, and we may come to the conclusion that Psychology, perhaps more than any other science is still too much in the clutches of word symbols, which have different meanings for different people. C.K. Ogden and I.A. Richards in their "Meaning of Meaning" (17), included a very revealing paper by F.G. Crookshank M.D., F.R.C.P. titled "The Importance of a Theory of Signs and a Critique of Language in the Study of Medicine". Anyone who read this paper, may have come to the conclusion, that Semantics would soon become an item for medical students. For the study of psychology, it may soon become a "must", as semantics may be defined as the theory of the significance of words and their influence on human behaviour.

Which terms should we use for semantography? Only practical consideration should influence us, that means: terms which could easily be explained to simple people, terms which are already "popular", and terms which work and which are already accepted by scientists.

From this point of view, Freud's terms are best, as they refer to

- (1) emotions, feelings, passions, ID
- (2) thought, reason, rational thinking, EGO
- (3) conscience, morals, spirit, SUPREEGO

A similar threefold division can be found in all languages, which indicates that men of all ages have thought similarly. What we have to point out, is, that religious people should not confine the influence of God to the third sector only. When we feel love and tenderness (without knowing why) for a flower, or an animal, or a baby, this feeling may have originated in the Id. When a clever man has evolved a chemical formula by clear rational thinking, it may have originated in the Ego sector. But for the religious man, there is no doubt, that the Creator influences the whole mind, no matter how we partition it.

The teachings of Freud have aroused much opposition, but today the storm has greatly abated and even some churchmen use his terms and recognize the practical application in help for people who need this help. Even Freud's term Psycho-Analysis is generally used today to cover all sorts of psychological theories and treatments, no matter how far they deviate from Freud.

Now, the author is sure about this: that this chapter will probably irritate very many people, even the Freudians, in spite of the many citations of Freud's own words; it will irritate the Jungians and the many other -ians. "Oversimplification" would be the mildest condemnation. The author asks forgiveness for all the shortcomings and begs that the reader should be aware of the difficulties involved; to choose a system, which is acknowledged, at least by a great part of science, and which is so simple (at least in its three divisions) as to be understood by simple people. Semantography should also be used by the man in the street. It should make him realize the limitations of all these high sounding words like emotion, passion, feeling, reason, thought, morals, conscience. He should realize that they have no absolute meaning with clear cut boundaries, that their meanings are interwoven (the Ego and Superego is still part of the Id and of each other as the drawing on page 166 shows).

Above all, we should be aware, that all these words refer to HUMAN EVALUATION, to SENSE REACTIONS within our brain, and different in different brains. Not one human being can absolutely determine that any reaction of his brain pertains only to the Id, Ego or Superego.

As said in the beginning of this discussion: it may seem simple to invent a system of symbols which would depict simple THINGS by their geometrical outline. However, to invent simple symbols which should be capable to depict the whole gamut of the human soul may be considered impossible by many people. These chapters should prove that it may be possible, even more, that the symbols may bring some clarity in the hopeless entanglement, in which all those notions are involved. If these chapters bring home only one clarification, namely, that these notions are relative in their meaning, that they overlap each other, and that we are usually unable to determine what's what, much would have been gained.

This idea of semantography is at present little more than a joke, (or should we say a practical joke). Its acceptance or dismissal may just depend on how those lofty notions are treated. The tension to write about all these very serious matters was almost unbearable for the author, and he thinks that only the genius of a P.G. Wodehouse could perhaps reconcile the reader with all the shortcomings of the author. Wodehouse would undoubtedly use for this purpose his national figure: the ideal of a gentleman's gentleman, his inimitable Jeeves.

PSYCHOLOGY AND THE INDIVIDUAL

(with Apologies to P.G. Wodehouse)

"You know, Jeeves," said Bertie, sipping his morning cup, "I couldn't sleep all night. That girl I met yesterday always kept coming into my mind. I tell you all feelings, my emotions, and my passions are roused by that girl. Undoubtedly, it is my Id, which kept me awake all night."

"Very good, Sir!"

"On the other hand, I have carefully thought out everything. I diligently employed clear, unemotional thinking, rational thought, pure reason and all that - my Ego, you know - and I came to the logical conclusion, that I can live no longer without that girl."

"Indeed, Sir!"

"But I believe now, that it is my Superego which demands categorically that I must do everything to protect this lovely creature from the cruelty of this world. It was actually my conscience, which denied me an eye-ful of sleep this night."

"Precisely, Sir!"

"You know Jeeves, I am a great admirer of your extraordinary faculties, and I simply wouldn't know how to get along without you, but up to this very moment, I did not know that you were a psychologist too."

"I endeavour to give satisfaction, Sir!"

T H E S Y M B O L F O R T H E I D

Feelings, emotion, passion.

"The Id ...contains the passions."

Sigmund Freud (59)


"You will ask, how could the Chinese have built up a great intellectual fabric from mere picture writing?..."

The Chinese language...has passed over from the seen to the unseen by exactly the same process which all ancient races employed. This process is metaphor, the use of material things to suggest immaterial relations."

Ernest Fenollosa (31)

"Small figures...employed in the place of words,...would represent visible things by their lines, and the invisible, by the visible which accompany them."

Gottfried Wilhelm Leibnitz (17)

"The heart  (in Chinese) gives numerous abstract words denoting sentiments and passions."

Basil Hall Chamberlain (9)

One of the foremost of our feelings is love, and for this the caveman has furnished us with an appropriate symbol




The Caveman's love letter

We should have no difficulty to understand, what the caveman wanted to depict with his picture. It is the sweet pain which penetrates our heart, when we suddenly see the beloved one. A pain it is, just as if the caveman's weapon, the arrow, would have gone deep in his heart. He knew how to depict an arrow, and he knew too, the outline of a heart, (which had been laid bare by deep wounds on some occasions).

He wanted to depict his feelings for his beloved girl, and after him, untold generations of young men have depicted it in the same way, all over the earth.

This sweet pain, caused by a sudden stoppage of the heart's action, had been interpreted by bygone generations, that the heart must be the seat of our feelings, and we find words in all languages about our heartfelt desire to extend the heartiest wishes, most heartily from the bottom of our heart, and it would break our heart, and would cause us great heartache, if their hearts would not be united. etc. etc.

























Naturally, the Chinese too chose the heart  (indicating partly the outline and partly drops of blood) to depict emotions.

We know, that the feelings originate in our brain, and not in our heart. On the other hand, the heart is such a practical symbol, already recognized in all countries, that we may be inconsistent and use it, just, as we use now the Hindu numerals 1 2 3 4 which are not as self- }
as the Roman numerals I II III IIII. } explanatory

We shall understand that the THING heart, with the THING indicator on top, is something entirely different from the symbol for feelings.

(172)

For the proper mind symbol for emotion, etc., the Id, see p. 401, where the "colloquial" heart symbol is replaced by the mind (unconscious) symbol.

			
heart the organ	Id emotions	to feel feeling	feelingly emotional impulsive
			
up-lifted feeling joy, happiness	much (multiplication)	delight jubilation	bliss rapture
			
downheartedness sadness, sorrow	very much (much much)	grief distress	desperation desolation
			
strong feeling ardor, zeal	passion ecstasy	minus without	emotionless feelingless
			
love affection	opposite meaning	hate animosity	without love loveless
			
adoration	idolization choose any suitable synonym	detestation	abhorrence

A certain picturesqueness of these symbols cannot be denied. On the other hand, it may be clear that poets purposely indulge in the use of synonyms, which may have certain different shades of meaning. Poetry is a kind of music, where the rhythm is provided by the sound of the words, the meaning of which adds to the emotional result. Writers of love letters may go on writing: I love, you, I adore you, I yearn for you, I am enraptured, fascinated, attracted, infatuated, enchanted by you.

If, however, his lady does not understand his language, he may resort to semantography, and may indulge in as many multiplication marks, exclamation marks, heart symbols and arrow symbols to his hearts desire. He will be understood, no doubt.























eye

beauty
lovelinessugliness
depressing sightgorgeousness
etc. etc.


In a later chapter on the symbols for past and future, the following symbols will be explained in detail. The question mark attached to the symbol for future indicates plainly enough, the uncertainty. But the same question mark attached to the past, should equally indicate that in many instances we ~~are not sure~~ ^{don't remember} what really happened in the past. However, we may drop the question mark for the past symbol if we think fit to do so.

past	future	happy memory	unhappy memory
hope, happy anticipation	fear, feeling down abt. future	feeling of <u>doubt</u>	feeling of <u>certainty</u>
surprise	astonishment	sensation	excitement
mouth	humour	smile	laugh
superior, above	inferior, below	haughty, proud	humble, meek
yes!	no!	to like	to dislike
feeling of <u>freedom</u> open	feeling of <u>oppression</u> enclosed	counter forces (see page 93) (outside impulses besetting you)	feeling of worries, troubles
attraction	repulsion	harmony	disharmony
opposition (see p.302)	feeling of opposition	anger (much opp.)	fury (very much opp.)

MORE METAPHORICAL "HEART" MEANINGS IN SYMBOLS

			
roof, cover protection	feeling of protec- tion, security, safe,	addition gain, plus	luck feeling of
			
sword, sharp	cruelty	fire	desire, wish
			
food (mouth & earth)	drink food-liquid	hunger (minus food)	thirst (minus drink)
			
ACTION	behaviour (actions by Id)	work (double action indic.)	play happy work, hobby
			
earth	rest feeling of	world (earth and sky)	peace contentment

Now, here are two and a half pages full of symbols, pertaining to human feelings and we can go on for another two pages or so, and cover the whole gamut of human emotion. And look, the symbols are not complicated after all. They tell their story, and they are even picturesque. They wouldn't look bad, even in a poem.

Poetical readers, who may scorn all this, should recognize however, that most symbols have been composed by poetical means, in a similar way as poets picture their feelings. Their heart is lifted up, or weighted down, it is pierced by Amor's arrow, their eye and heart rejoice in beauty, they use the exclamation mark, which was formed, according to Bilderdijk (28), from the Latin word Io, meaning joy, written vertically, thus .

Poets often use the roof to indicate protection, the sword for cruelty, the fire for desire, the earth for rest and they may indicate peace by imagining their heart filling the space between heaven and earth.

The reader, interested in semantics, in a study of the clear meanings of all these words, would however realize, that all these meanings indicate feelings within our skin, activities of our brain and different in different brains. Not two human beings are alike and not two brains are alike, and therefore the meanings of all these notions will differ with different individuals. These meanings are relative. It is impossible to force anybody to have exactly the same feelings, or to refute him. All this pertains to HUMAN EVALUATIONS, and SENSE REACTIONS respectively.

All words, be they nouns, as love and lover, or verbs, as to love, or adjectives as lovable, beloved etc. fall in this class.

"The Ego represents what we call reason."

Sigmund Freud (59)

"Man, it appears, is still constantly handicapped by his dependence on instinct, habit and emotion, rather than by reason, and by his muddled way of thinking. May it not be that much of this unreasonable muddle is due to the simple fact, that our symbols for thought-language are not yet set in order; that in the matter of thought symbolism we are still much in the same state of confusion, as the Romans were in their arithmetic, before the introduction of the "Arabic" numerals? We should be horrified nowadays at the difficulty of multiplying MDCCLIX by LVII; to the educated Roman it seemed natural and inevitable, but his arithmetical powers suffered in consequence.

Richard Paget (3)

Rational reasoning is supposed to be the method of the scientist; however, he is a human being too, with all his emotions and feelings. As a human being, he is not able to differentiate exactly between his emotions and his unemotional reasoning. We have learned that they are interwoven, the Ego is part of the Id. The history of science is full of cases, in which scientists have attacked theories of other scientists with emotion, expressed in very strong language, not even shrinking back from the use of invectives. However, the attackers believed, that only reason, clear unemotional thinking, was driving them on.

We never know how much of the Id and how much of the Ego is involved in our thoughts. We have not yet constructed apparatuses, which can be attached to brains in order to give some exact measurements, valid for any individual. Up till then, we must realize that every individual has the right (and cannot be refuted) to attribute some thoughts of his brains to his Id or Ego or Superego. If he says: "I doubt!" he may believe that his doubt, is purely emotional, or that his doubt is based on clear unemotional thought or on his conscience. He himself cannot clearly distinguish, but neither can you, so stop convincing him, or accusing him that his actions are "not dictated by reason, but by emotion". Such arguments lead nowhere, because they refer to meanings which are relative and for which every individual is another system of reference.

A simple symbol for the Ego, (situated in the brain) would be the outline of the portion of the skull, which covers the brain.



brain, mind
the chemical THING
(outline of skull)



to think
to mind



thoughtful
mindful

If you want to write the symbol for doubt, you are free to choose either the Id or Ego symbol, according to your own EVALUATION.



doubt
emotional



doubt
rational



certainty
emotional



(opposite symbol)

certainty
rational

SYMBOLS FOR THE MEANINGS OF REASONING THOUGHT

reasoning rational thought	much, very much	intelligence	wisdom
positive	negative	yes!	no!
good rational	bad rational	good, liking emotional	bad, disliking emotional
doubt rational	probability doubt, but positive	improbability doubt, but negative	guess by reasoning
interest	strong interest indic. importance	a thought (including an idle thought)	an idea a reasoned-out thought (mind flash)
speech (mouth)	opinion	vision (eye)	observation
purpose (see page 302)	counter-purpose opposition	proposal voiced purpose	contradiction, objection voiced opposition
worries, trouble (besetting mind)	progress	spite, courage (one against two)	success (arrow forward)
to lead to guide	flag (symbol of state)	state, country (flag on earth)	to govern lead the country

As said before, every individual who makes a statement, as for instance: "I doubt!" is free to choose either the Id or the Ego as his symbol for reference. He makes the EVALUATION whether his doubt is emotional or rational. A leader, who governs the country, would surely choose the symbol for rational thinking and reason, the Ego symbol. Whereas his adversaries would think, that he is only driven on by passion. It's all relative.

			
desire, wish (heart & fire) emotional	desire, wish rational	security, protection (heart & roof) emotional feeling	security rationally contemplated
			
hand	THING	tool (THING in hand)	use, useful
			
I individual	will	man will (sentence)	willingly
			
stop	refusal	through	permission
			
stop thinking (sentence)	decision (compound symb.)	I decide (sentence)	decidedly
			
past	future	experience rational	anticipation rational
			
elation rational	happiness emotional	depressive reasoning	downheartedness emotional

The last line shows that it is up to the writer to use the symbol for reason or emotion, according to his own EVALUATION. Some readers may argue, that there are slight differences and shades of meaning between two words covered by the same symbol, as for instance contradiction, objection or opposition. But it can be shown that different writers, although using them in a different way, mean basically the same: thoughts opposed to other thoughts. It may be pointed out, that the reduction of this class of words to basical meanings, expressed by basical symbols, could help to remove a curse, now weighing heavily on all writings on psychology. The readers understand those vague words very often in a different way than the author. Opposition and arguments are the result.

Psychologists, who use already schematized drawings to explain their terms, could invent simple symbols for reports in's emantography. The five pages of symbols (more to come) may have convinced many readers, that simple symbols could express the gamut of human emotion and reason. In the coming chapter, we shall see, that the same basical symbols can be used in the realm of human conscience.

THE SYMBOL FOR SUPEREGO

"Ever and ever again human beings arise, who understand what is meant by the fact that God is our father."

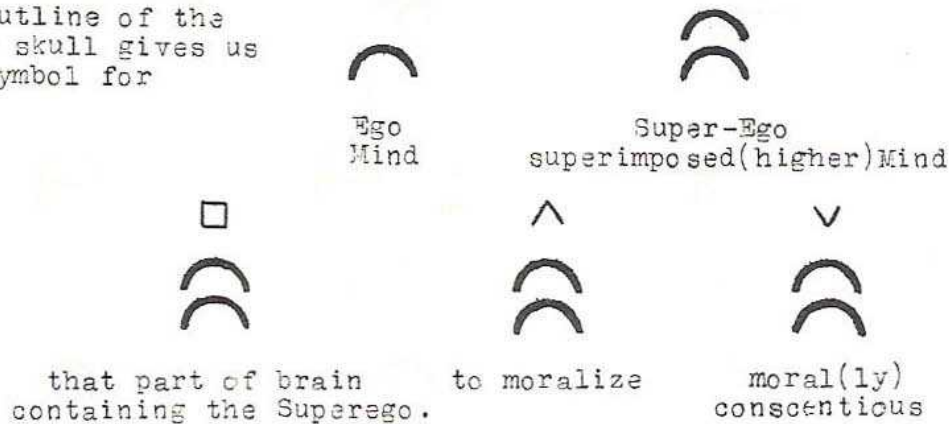
C.G.Jung (60)

"As a child grows up, the office of father is carried on by masters and others in authority; .. their injunction and prohibitions... continues, in the form of conscience, to exercise the censorship of moral."

Sigmund Freud (59)

As Freud's term implies, we have here a "higher" reasoning, superimposed on the reasoning of the individual. The meaning of super, over, above gives us a clear spatial indication of how to form our symbol for the Superego.

The outline of the upper skull gives us the symbol for



How far psychologists may differ in the interpretation of their terms, in regard to mentally sick persons, is not our concern. We want to find a simple symbol, in order to differentiate between so-called logical reasoning and reasoning dictated by some "higher" mind, which influences us and which is popularly called our "conscience". It may be the voice of the Creator, or your father, or your mother, your churchleader, your teacher, your friend. Unfortunately, with many persons, these voices are drowned by other voices, belonging to minds, superimposed upon their minds, their political leaders, their prophets of intolerance and hatred and others. Their Superego allow those people to commit the most atrocious crimes with a "clear conscience"

As said before, Freud has been strongly attacked by many people, who simply did not understand that Freud chose a medical term which would fit even the obviously perverted "conscience" of many people. Religious people will find God not only in man's "conscience", but also in his feelings and emotions, as well as in his logical reasoning, in the Id, as well as in the Ego and Superego.

The author is afraid, that many people may reject semantography, just because of the handling of the terms, pertaining to "conscience". He is very anxious, that he should be properly understood.

Eddington's table may serve for our contemplation.
















Id: "What a beautiful table. I like it. I will buy it."

Ego: "It's wobbly. Besides I don't need a table."

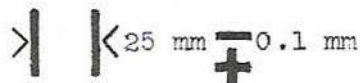
- Superego, Voice Nr.1: "It's wrong to spend money on luxuries. Save for your children."
- Superego, Voice Nr.2: "If you have money to spend, make a donation to charity. Help those who need help."
- Superego, Voice Nr.3: "Don't buy from that foreigner. They should go where they belong."
- Superego, Voice Nr.4: "Don't support the capitalist system. Buy from the craftsman directly."

In the end, the individual may buy or not buy the table, without really knowing what influenced him most, the Id, Ego, or one of the Superego Voices. Be sure, that he will find a perfect justification for buying or not buying the table, and he would attribute it to the Id, Ego or Superego. But another brain may think differently, and there are not two brains alike. You may picture a certain meaning with the Id, or with the Ego or with the Superego symbol, according to your own EVALUATION, which is wholly relative.

Later on we shall see, that some sort of yardstick can be found, to measure even right and wrong, just as we found yardsticks to measure long and short.

	ID	EGO	SUPEREGO
			
	emotion	reason	conscience, moral
			
	doubt	doubt	doubt
plus			
	good, liking	good	good, right
minus			
	bad, disliking	bad	bad, wrong
plus, minus			
	tolerance	tolerance	tolerance

The word tolerance is not only used in the realm of moral, or with regard to a "goodnatured heart", but also in engineering reasoning. An engineer ordering a steel shaft of 25 mm width, is ready to tolerate errors and he defines his tolerance in exact mathematical figures and signs.



width: 25 mm, tolerance 0.1 mm ±


Tolerance in engineering.

T H E R E L A T I V I T Y O F M I N D

"Each mind has its own method."

Emerson

But who is to decide what symbol to use, Id, Ego, or Superego? The answer is: Only the individual himself who wrote the symbol. It is his own private opinion. You may agree with him or you may disagree, but never forget, that your opinion and his opinion are only relative, never absolute. His system of reference is his brain. Your system of reference is your brain.

Whenever you see these symbols  in any compound symbol or in a sentence, you must realize that they refer to the system of reference of the writer, his brain, which differs from any other brain. All these word-symbols are relative in their meaning.

Let us suppose that two telescope cameras, placed in different spots on this earth, record an eclipse of the sun. Both recordings would differ from each other. Which is right and which is wrong? None; each recording is valid with reference to the particular point in space, from which the observation was made. Both recordings are relative to their system of reference.

The ideas of Einstein have revolutionized the "language" of physics. In due course, they must revolutionize ordinary every-day language. The language of physics is used to describe the world and its events. So is ordinary language.

We may draw the analogy further. Einstein, after showing us, that all our observations are only relative, went out to evolve invariant formulas, which are valid for any observer.

Similarly, we may be able to evolve invariant formulas about good and bad, right and wrong, valid for any observer.

Semantography should be a tool, crude as it is now, for this purpose.

L E I B N I T Z' D R E A M

"Leibnitz desired the creation of a language, which should be an instrument of reason. The words must embody the definition of ideas, so that they may be deduced by algebraic transformation. He argued, that all complex ideas are the product of simple ideas, as is the case with figures.

E. Sylvia Pankhurst (4)

Every book on language planning contains references to Gottfried Wilhelm Leibnitz, the philosopher-mathematician, who advocated a symbol writing, without however making any attempt to devise one. His thoughts about language planning are of such pioneering character, that modern planners, like Bodmer and Hogben say, that Leibnitz - 300 years ago - was far ahead, even of the language planners of today (see page 39).

In this chapter, it should be shown, that it is possible to fulfill the dream of Leibnitz, although only in a crude way.

Leibnitz believed that it is possible to build up complex meanings, from basical meanings. In a similar way, modern chemical formulae show the building-up of complex matter, from basical matter, the elements.

In using the elements of semantography we may build-up a complex meaning, and may do it in some sort of mathematical calculation - never-mind how ridiculous it may seem to some readers. The mathematics necessary is the kind we learn in school at an age of about 12-13 years: equations with unknowns.

Let us take the complex meaning of APOLOGY. What "is" Apology?

The mathematical formulae involve 3 unknowns x, y, z.

$$x = a + y \quad \dots\dots\dots(1)$$

$$y = (b + c) + z \quad \dots\dots\dots(2)$$

$$z = d(e + f) \quad \dots\dots\dots(3)$$

Translated into ordinary language it runs:

Apology = a verbal expression of shame

Shame = a depressive feeling of being wrong

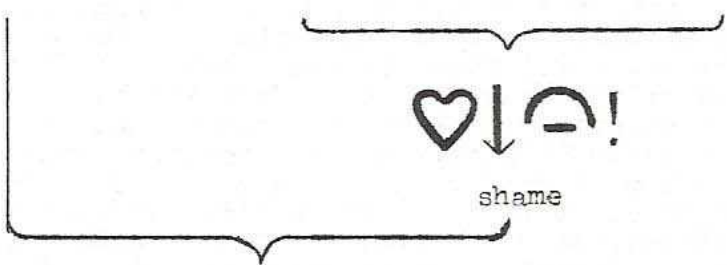
Wrong = a mental conclusion, definitely negative

In these formulae a b c d e f represent the known symbol elements

○	↓	♥	∩	-	!
saying	down	feeling	reasoning	negative	exclamation mark

APOLOGY = ○ ♥↓ ∩!

 saying unhappiness wrong



○ ♥↓ ∩!

Apology

These examples show that the symbol formulae work similarly to chemical formulae. The compound symbols for apology, shame, wrong, unhappiness reveal the meaning elements, like NaCl, NaClO.

This is, of course, only an analogy, but an analogy which works. The compound symbol for apology explains better than a hundred words, what apology really means. Do children know what it means, even if they are told many times;

"You naughty boy! Go up and say: I apologize." -z-e?)

"I apologize!" (But does he understand this strange word a-p-o-l-o-g-i-

The symbols explain in simple terms, what the word apology means:

"Look child, you open your mouth and say ○ that your heart ♥ is very down ↓, that you feel unhappy ♥↓ because your mind ∩ thinks no-! to what you have done."

This symbol compound refers to an apology of the ordinary kind, as for instance, when the child has broken something. If the apology is to be made on moral grounds, as for instance, if the child was cruel, than the symbol for the Superego would have to be written



Apology
on moral grounds

and religious parents and teachers should have no difficulty, in pointing out, that the "higher" mind in the symbol, is the mind of the Creator. Even if some of them prefer to say, that it refers to the mind of Spinoza, Erasmus, St. Peter, or Emerson, Ruskin or Carlyle, what difference does it make? All these have been humble creatures, and what they thought and what they were, was just another expression of what we call Creation or Creator, or whatever word we substitute.

Educators, who operate according to modern psychology, may explain, that the "higher" mind in the symbol, depicts the mind of the father or mother and thus, we are back, from where we started, the teachings of Sigmund Freud, and his co-worker C.G. Jung, who said, that God is our Father.

No matter how much opposition and rejection all this writing may cause, we all may agree that the present way of thinking, as done by ordinary men and women, is a very muddled one, just as -to use again the same analogy - just as the thinking of the alchemists of old was a very muddled one. It was precisely chemical symbolism which brought clearness were vagueness once prevailed, and there is every reason to hope, that a new word-symbolism may bring clearness and understanding to ordinary people, who are at present entangled in a hopeless way of muddled thought. The peace of the individual, of the family, and the world, depends on it.

Of course, this semantography is just a crude beginning. Compared with what Leibnitz dreamt of, it is just like a tiny flickering oil light, hopelessly inefficient, but still lighting up our path. Think of the efficiency of the modern electric lamp, in which only 95% of the energy is wasted. After many years of toil of thousands of research workers, to which I too had the honour to belong, we made the terrific progress towards the fluorescent tube, which wastes only 85% of electric energy and produces 15% of light energy. What a progress!

Progress is made only by small steps. And this semantography is now, little more than a joke.

A WORD TO THE READER

After nearly 100 pages on the system of semantography, it may perhaps be good to stop and look back over the way we proceeded. No matter how antagonistic some readers may be to the whole idea, they may agree that the promises given in the beginning, have been fulfilled to some extent. The author believes to have proved, that we can depict with simple symbols, (taken from the scribbling of children) not only the things around us, not only actions of our every day life, but also human feelings, human thought and even meanings pertaining to conscience and moral.

Moreover, the author believes to have proved, that a very small number of symbols, representing elementary meanings, can be used over and over again. Actually, not even 100 symbol elements are necessary, and it will be shown later on, that the other 100 symbols, mostly forming the outline of things, can be represented by the first 100 basical symbols.

After the demonstration contained in the foregoing chapters, it may be assumed, that it would not be difficult to evolve a few simple rules for the grammatical construction of sentences. The coming chapters are devoted to this purpose and they may make enjoyable reading, even for those readers not interested in grammar. It may well be that progressive grammarians may consider the semantographic grammar as a simple tool to teach enjoyable grammar to children.

Interspersed are chapters, devoted to symbols for special practical purposes.

WORD ORDER

"I wonder how many people have asked themselves why the sentence form exists at all, why it seems so universally necessary in all languages? Why must all possess it, and what is the normal type of it? If it be so universal, it ought to correspond to some primary law of nature.

The sentence form was forced upon primitive man by nature itself; it was not we who made it; it was the reflection of the temporal order of causation.

Agent - Act - Object. It seems to me that the normal and typical sentence in English as well as in Chinese expresses just this unit of natural process. A different sentence order is frequent in inflected languages like Latin, German or Japanese. This is because they are inflected, i.e. they have little tags and word endings, or labels to show what is the agent, the object, etc. In uninflected languages like English and Chinese, there is nothing but the order of words to distinguish their functions and this order would be no sufficient indication, where it not the natural order - that is, the order of cause and effect."

Ernest Fenollosa (31)

Before we embark on these chapters on grammar, let us make clear the following:

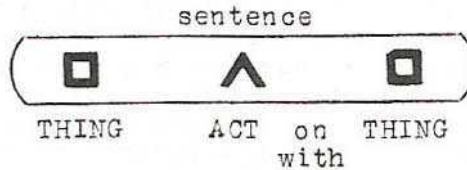
The grammar of semantography is not intended for learning a foreign tongue. It is solely constructed as a simple device for the people, who can speak their mother tongue (no matter how "incorrect"), but who need some rules to construct internationally valid sentences in semantography.

No better explanation could be given as that by Prof.Fenollosa, quoted at the beginning of this chapter.He regards the sentence rule

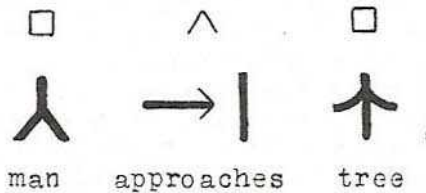
Agent - Act - Object

as corresponding to some "primary law of nature,forced upon primitive man by nature itself".This tallies with the view held in this book,that the grammatical rules of language conform primarily with chemical and physical rules,the "laws of nature"

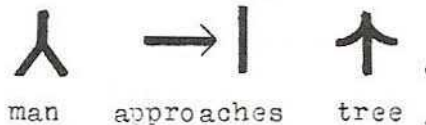
We shall form our first sentence rule thus



Here is an example



But we do not need the indicators in a sentence like this:

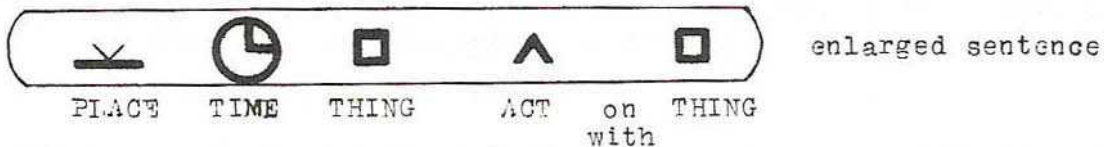


At the end of this line,composed of three symbols, a dot has been placed,marking a full stop,and indicating that the three symbols belong to and form a full sentence.We should then have not much difficulty to guess the proper meaning,even if no arrow is shown to indicate an ACTION.



These three symbols indicate three THINGS.But the sentence Man-Cutter-Tree., or Man-Knife-Tree.,or Man-Sword-Tree.,makes no sense.The second symbol refers to the ACTION of that particular THING,to cut.

We may now form an enlarged sentence,by placing first the name of the place,and the time of the happening,thus



Mentioning the time at the beginning of the sentence,makes it unnecessary to indicate the past or present or future tense of the verb.It becomes clear whether I ate,or have eaten,or eat,or shall eat.Moreover we can drop the symbol for the THING:food. I eat is quite sufficient.

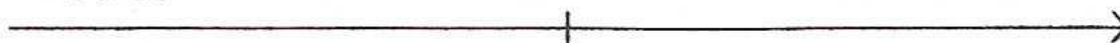
T I M E A N D T E N S E

"Chief reproach to be addressed to Esperanto, Ido, Romanal is, that their conjugation are too subtle and too rich.

The conjugation of Volapük was extremely rich, but arbitrary and complicated. A Volapük verb, according to Mr. Karl Lentze, could take 505,440 different forms."

Albert Léon Guérard (20)

This line



should indicate the flow of TIME. The short vertical line fixes a certain date on this time line, giving us the general symbol for



to fix
(generally)



to date
date

If we fix the date right now, we have



then
PAST

now
PRESENCE

then
FUTURE

This is a clear-cut division according to the rules of physics, and it does away with a lot of unnecessary tenses. We need only 3 tenses:

I worked

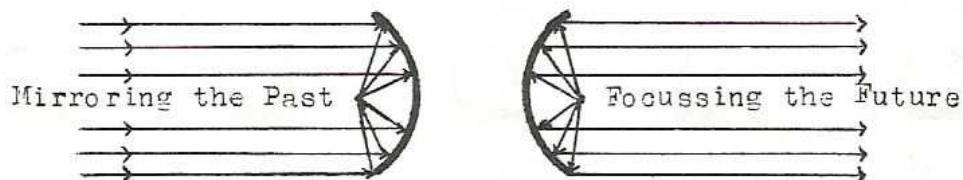
I work

I shall work

but not more I have worked, or I had worked, or I shall have worked.

In this respect however, English is a model of simplicity. In other languages there are many redundant tenses, which are a nightmare, even for the native.

A good spatial symbol for Past and Future is a parabolic mirror's outline:



We can form now our symbols for



past












presence



future

We can also form our indicator to be put on the top of the symbol. However we can dispense with the elaborate symbol for presence.

HOW TO SYMBOLIZE PAST, PRESENT, AND FUTURE

)	^	(
		
have turned	to turn	shall turn
)	^	(
		
have watered	to water	shall water
)	^	(
		
have thought	to think	shall think

The different words think and thought remind us of that horrible monster, roaming through all the languages; the irregular verb.

"In acquiring a foreign language a great deal of trouble is caused by the irregular verb. But why learn them? It is easy to regularize them. A child's 'I thinked' instead of 'I thought' is perfectly intelligible."

George Bernard Shaw (53)

Shaw points directly to the agent, responsible for simplifying language: the child, and (we may well add) the simple man and woman, who horrify the educated people, by not adhering to the niceties and irregularities of "correct" speech. Children forgot that the plural of cow is "correctly" kine, and said cows. And so it happened with many other irregularities, which are fast disappearing.

If we place our past and future indicators on the ground writing line they become the particles

<u>ground</u> <u>line</u>))((
	then	now	then

and in combination with the symbol for day (sun over earth), we get

				
day before yester-day	yester-day	to-day	to-morrow	day after to-morrow

We can avoid the indicator on top by indicating time at the beginning of a sentence, as shown in the previous chapter.

), ^ ^ .)(, ^ ^ .	(, ^ ^ .
Then, man hammered.	Now, man hammers.	Then, man will hammer.

This is, of course, the shortest sentence. We may start a story with: "It all happened 3 years ago" and then go on, using no tense indicator throughout the whole story.

The big symbols indicating Past, Present, and Future have been shown (187) in the beginning of this chapter. However, for semantical reasons, we are going to put question marks in all three symbols:



Past



Present



Future

Why the question mark in all three symbols? It appears natural in the symbol for Future. We don't know what the Future will bring.

As for the Past, we may frankly admit, that - in many cases - we don't know what happened in the Past. We are sure about certain undeniable facts: Darios died, Cesar died, Hannibal died, Columbus landed in the West Indies, this house was built in 1933, that bridge broke down in 1940. But as to more detailed facts, we have to rely on historical reports. Who wrote them? In very many instances - court historians - either they were willful servants of their rulers, or they found it healthier not to tell the actual facts. Dungeons and death were as unpopular 3000 years ago as they are today in a modern dictatorship.

But in a modern democracy with "freedom of speech" and all that? Well, we have to read the reports about certain events in different papers, to convince ourselves that everyone brings forth a different version of what "really happened". And the fervent adherents of the political party of each newspaper, will fervently believe that their paper tells the "truth" and that the others lie. So what happened "really"?

You may say: only an eyewitness can tell what "really" happened. Well, suppose you are amongst a crowd at a street corner. Suddenly a shot rings out, a scream, the screech of brakes, people running, a woman on the pavement...

At the police station 100 eyewitnesses will give 100 different accounts, as diversified as 100 different murder stories. And you will be one of these eyewitnesses.

Don't forget, this happened say 3 hours ago, not 3000 years ago, and you are unable to give a factual account of what "really happened" in the Past. *Do you remember what you did on the 15th May 1964? (Claire's handwriting)*

The German general Hoffmann, chief of staff of the German Eastern armies in 1914 has been quoted of saying: "If a legend could have been built up in 1914 - in our times - that Hindenburg won the battle of the Masurian marches, then I do not believe that Cesar ever lived."

Of course, Hoffmann was biased. Although others have augmented his view about Hindenburg's innocence in regard of this victory, Hoffmann believed that he is the "real" victor of Tannenberg. But did he "really" know, what "really happened"? It may well have been, that the Russian General Rennenkampf had just one bottle of vodka too much.

So let's put the question mark in our symbol for the Past. It will help us in our daily life, not only when reading the newspapers, but also in our work. Let's think twice when interpreting the Past.

The Present is depicted by the symbols for Past and Future. It is a fleeting glance between Past and Future.

And now a few symbols.

find



experience
rational



expert



prediction
prophecy



prophet

The word "expert" becomes questionable, and rightly so. There is the expert astrologer and the expert economist, besides others. What are they? They are men of the present. They interpret "rationally" past experiences to predict the future. Some technical "experts" predicted that railways won't run at 30 miles p-r hour. Some medical "experts" predicted that people will die travelling at such speed.

The question mark will have a healthy semantical effect. Let's be wary!

(158)

T O D O O R T O B E D O N E F O R

"Could any linguistic expedient be more worthy of the genus homo sapiens than using for different purposes, with different significance the same words in different position to build sentences like John beats Henry and Henry beats John? Cannot this be compared with the ingenious Arabic system of numeration, in which 234 means something entirely different from 432?

Language tend on the whole more and more to utilize word-position for grammatical purposes and this is really a progressive tendency."

Otto Jespersen (63)




"Agent - Act - Object... this unit of natural process. A different sentence order is frequent in inflected languages like Latin, German, Japanese... they have little tags and word endings, or labels to show what is the agent, the object, etc. In uninflected languages like English and Chinese, there is nothing but the order of words to distinguish their functions and this order would not be sufficient indication, where it not the natural order - that is, the order of cause and effect."

Ernest Fenollosa (31)

We have formed the sentence

		
man	cuts	tree

and this is the natural order from the standpoint of the physicist

		
THING	ACTS on	THING

The grammarian calls this the active form. The man who does the cutting is active. However, the tree, which bears the cutting is passive. Consequently the passive form in grammar is expressed by the sentence: Tree is being cut by man.

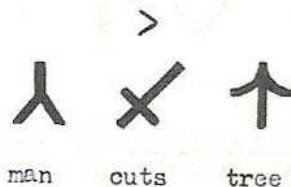
In the first years of the spread of semantography we should cling to the most simple sentences. The reason is obvious. Semantography should be simple to the people of different countries, speaking different languages with different grammar and different word order. Otherwise there may be a break-down in communication by semantography. The grammar of Esperanto and of other constructed languages were overloaded with a richness of subtle differences in expression, which in the end has proved a serious handicap, not between two Esperantists who think in the same mother tongue, but between two Esperantists who speak different languages. Otto Jespersen, one of the greatest linguist of our times, a pioneer for Esperanto and the inventor of Novial (NOV International Auxiliary Language) wrote, that he can recognize the mother tongue of any Esperantist from his Esperanto writing. Moreover, some sentences in Esperanto which seem incomprehensible, Jespersen could only decipher by translating ~~it~~ in the mother tongue of that Esperantist (by following the word order) and then the sentence became comprehensible.

In other words: let's be very careful in our sematographic writing. Let's not indulge in complicated sentences and in subtle differences of expression. Let's write only the simplest sentences. And let's use only the active form, the "natural order", that is the order of cause and effect."

For the critics however, who may think that the passive form is a problem too difficult for semantography, herebelow it is shown how simple the solution is.



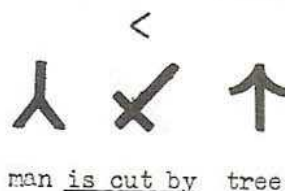
The direction of the ACTION goes from the man to the tree, in our writing from left to right. If we have to indicate the active ACTION form for any reason, we may turn our ACTION indicator in the direction in which the ACTION goes, thus:



Whenever you see the ACTION indicator pointed sidewise to the right, you should know that the writer was unnecessarily overanxious to be understood that he means active ACTION directed towards the next symbolized THING.

Of course, the active ACTION indicator is unnecessary. But it gives us easily the passive ACTION indicator.

Let us suppose that the tree, in falling down, cuts the man. Obviously the direction of ACTION is reversed. The tree is the agent, the man the object



Obviously the ACTION goes now from right to left, from the tree to the man. And this is the whole story about the active and passive form in semantography. We may safely assume that these spatial directional indicators will have the same meaning in different languages, no matter how much they differ in grammar and word order.

The quotation by Prof. Fenolossa (at the beginning of this chapter) show that English and Chinese are not inflected languages, and for these languages the word order of semantography is similar. However, there are the inflected languages, in which the agent and the object are indicated by word endings, etc. In Russian for instance, the three words John killed Jack are not sufficient to know who is actually the killer and who the victim.

In 1945, Harry Weiser, who is teacher of English language and literature (together with his wife) in Moscow, wrote a delightful article in the American monthly ATLANTIC (64) about the psychological difficulties which Russian learners of the English language encounter.

One amazing non-sensical grammatical oddity in Russian is the use of a verb in the passive form, although the active form is meant. According to Weiser, a Russian sentence would run:

Desdemona was admired by the bravery of Othello.

This is nonsense of course, because what the Russian means is actually:

Desdemona admired the bravery of Othello.

Similar difficulties we encounter in all languages, which are "naturally" grown. The native usually does not become conscious of these oddities, but the foreigner becomes too painfully aware of them.

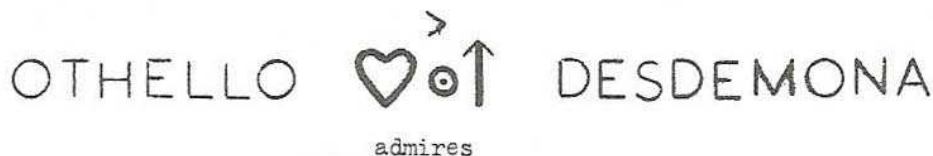
Such oddities should disappear in semantography, which follow the rules of physics. They are the same in all countries.

THE SYMBOLIZATION OF THE ACTIVE AND PASSIVE MEANING

Let us write for instance the sentence Othello admires Desdemona in symbols. We need first our symbol for admiration which is easily composed from the elements.



To make ourselves understood to a Russian, we are now going to use the ACTION indicator to point out the active form.



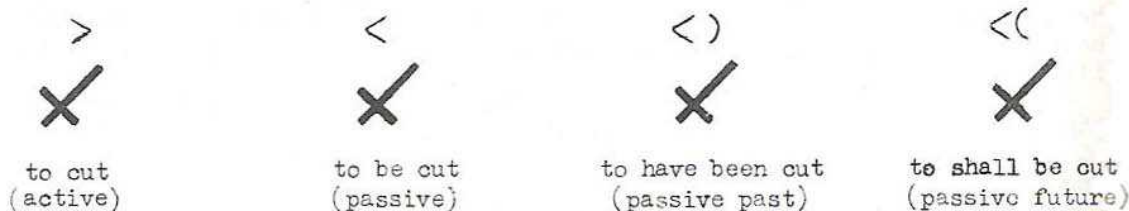
If however, Othello is admired by Desdemona the direction of the ACTION, and consequently the direction of the ACTION indicator is reversed



A Russian should have no difficulty to understand who looks up to whom in admiration, in spite of the Russian oddity of the passive form. If we now write



the Russian would encounter another difficulty. If he would just say in Russian: Othello stabs Desdemona it would not be clear who stabs whom. It may be Othello, but it may be Desdemona. The Russian language, like many others is an inflected language. Mere word position, like in English, is insufficient. Little word endings, acting like labels, are necessary to indicate who is the agent and who is the object. A Russian, who would write the above sentence in semantography, would feel, that he has to add a little tag, to make it perfectly clear in which direction the dagger was pointed. Well, let him do it, it does no harm.



But of course, all these indicators are unnecessary in a report in semantography. We agree not to use the passive form, which is the "perverted" form of the "natural" active form. Furthermore, in a report written in semantography, we shall state right in the beginning, whether the whole report refers to past happenings or to an event to be performed in the future. Then we shall need no indicator of tenses throughout the whole story.

Note to alarmed readers. Firstly, Othello did not kill Desdemona with a knife. He smothered her. Furthermore the above symbol in ACTION does mean only some kind of cutting, (severing). To kill or to injure will be expressed by other symbols (to be shown later). Furthermore, we shall never use the symbol of a knife, to say, the tree cut the man, because a tree does not use a man-made instrument. We should say in symbols the tree fell upon the man, the tree killed or injured the man. All this tends to show how difficult it is to make chapters on grammar enjoyable reading.

A QUESTION ON CONDITIONS OF WORK

"Conditional sentence. A sentence expressing the relation of condition to conclusion between its subordinate and main clauses. Several of its types are: past neutral (if he won, he was lucky), past contrary to fact (had he won, he would have been lucky), present neutral (if he is winning, he is lucky), present contrary to fact (if he were winning, he would be lucky) future more vivid (if he wins, he will be lucky), future less vivid (if he should win, he would be lucky)

Webster's New International Dictionary (28)

We may be rest assured, that the simple man in the street is not bothered by the above grammatical nightmares. He finds simpler expression, to say exactly the same. Even the Chinese in Pidgin English can make himself perfectly clear: If he win, he lucky, or If he win past, he lucky, or If he win future, he lucky.

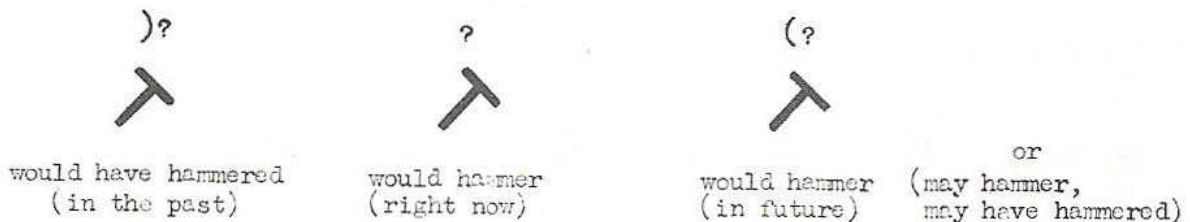
Behind all these conditional expressions looms very vividly an international symbol, the question mark ?. Consequently we are going to use it extensively. And the reader may guess that the particle if will contain a question mark.

The symbol for if will be shown in a later chapter. Here we shall only deal with the conditional verb form, and shall see, that the matter is actually very simple.

We have already learned how to symbolize the three tenses past, present, future.



We do not need to add the ACTION indicator to the Past indicator ^ or Future indicator (, because these indicators) and (show clearly that an ACTION (verb) is meant. The conditional is now easily expressed by putting a question mark (?) or top of the symbol. This indicates clearly a conditional verb (ACTION) form.



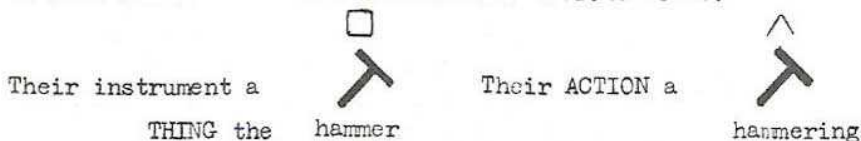
And this is all there is to it.

IN THE BAZAAR OF BAGDAD

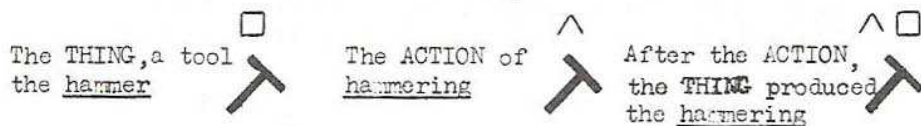
"The third subterfuge, the untraquistic, has probably made more bad argument plausible than any other controversial device, which can be practiced upon trustful humanity. It has long been recognized that the term "perception" may have either a physical or a mental referent. Does it refer to what is perceived, or to the perceiving of this... The untraquistic subterfuge consists in the use of such terms for both at once of the diverse referents in question."

THE DIFFERENCE BETWEEN THING-ACTION AND ACTION-THING

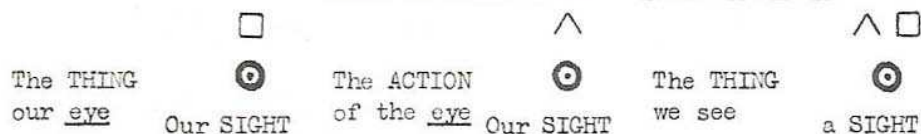
Let us suppose that we are visiting the shops of the silversmiths in the bazaar of Bagdad. They are masters in the art of hammering which is called "embossing". A thin silver sheet is hammered into various forms.



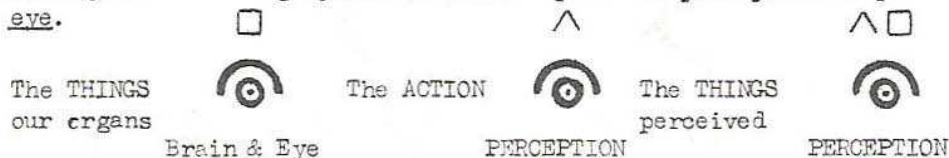
Now, one of us says: "Look at this young worker. His hammering is exquisite."
 But another says: "I don't agree with you. His hammering is very poor. He is just a beginner."
 The first again: "But I don't mean his work. I mean his ACTION. The way he swings his hammer. I think, his hammering is full of grace."
 The second: "But I do not mean his ACTION. I mean the THING which he produces his hammering, his embossing. It's very clumsy. Look at that ^{new} bowl. It must be at least 200 years old. That hammering is full of grace and beauty."
 The first: "Now I see. We both use the word hammering, but for me it means the ACTION, whereas for you it means the THING produced by the ACTION."
 The second: "How should we express this difference in semantography?"



This example however is simple. We have the outline of a tool, designed to make or transform another THING by ACTION. But the same ambiguity exist with other THINGS, which we use, although we do not produce a new THING, as for instance Our SIGHT enables us to see a SIGHT.

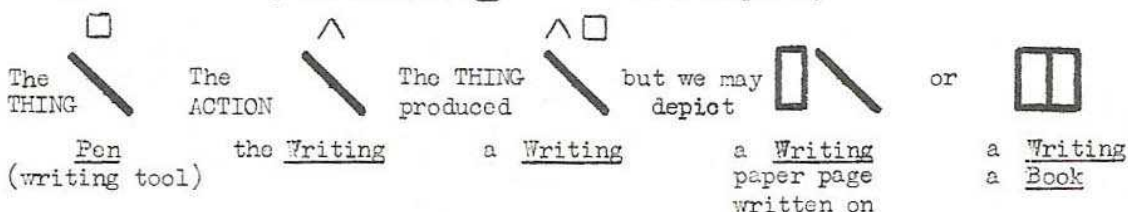


Now we can handle the controversial subterfuge, mentioned by Ogden and Richards in their "Meaning of Meaning" (see quotation at the beginning of this chapter). The word Perception, means our ACTION of perceiving, but also the THINGS which we perceive with our senses, which in themselves are parts of our body and therefore chemical THINGS. In the coming symbol we shall depict the perception as performed by brain and eye.





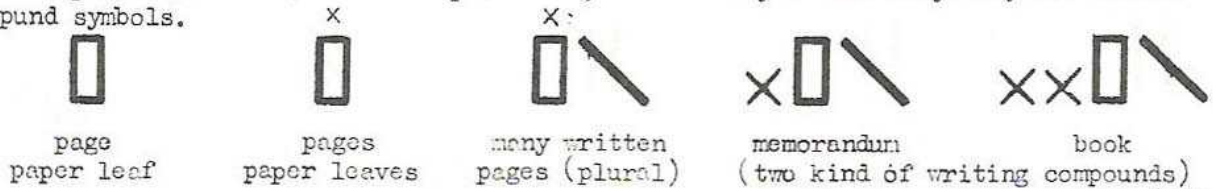
For ordinary, simple reports, the picturing of such subtle differences of philosophical terms, is wholly unnecessary. We shall see later on, that we can find a simple symbol. But the above arrangement clears up the handling of terms, which - in the words of Ogden and Richards - "has probably made more bad argument plausible than any other controversial device, which can be practiced upon trustful humanity."


Instead of using the device $\wedge \square$ we can find a simple symbol.



Now, here is an opportunity to show the difference between the first 100 basic symbol elements, and the auxiliary second 100 elements.






The symbol for the pen  and the symbol for the paper leaf  belong to the 100 basic symbol elements. With them we have built up in the foregoing paragraph the compound symbol for the ACTION a writing, for the THING produced, a writing, and also a written page. We can easily form the following meanings by using the multiplication mark X for the plural X, and for many X and very many XX in compound symbols.



Instead of using these basic symbol elements for book, we choose a simple symbol  which we count as auxiliary, very handy and simple, belonging to the second 100 symbols.

In a later chapter we shall learn the symbol for to build. With this we can than write unambiguously the sentence

Building produces a Building

Instead of depicting a Building as the THING produced by the ACTION, we draw  which depicts better than anything else a Building. This symbol is composed from the symbol elements earth, ground , roof  and walls  a derivation of limits 

Let us now get back to our new notion; the THING, produced by the ACTION. Sometimes we may use the symbol of a tool, but this tool does not produce a new THING. In ordinary language however it does. Take for instance the sentences.



We use a CUTTER to make a CUT in our table. CUT is the ACTION
The CUT remains visible for years to come. CUT is the THING

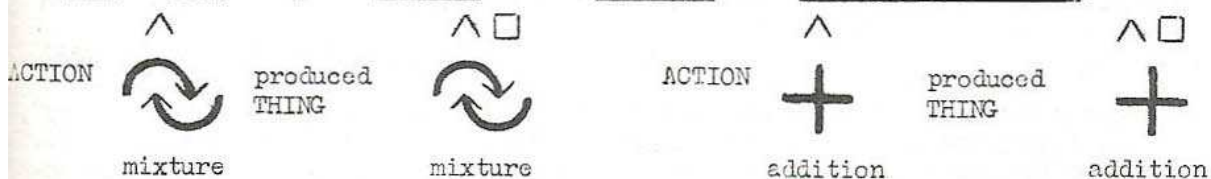
The ACTION of the CUT took us a fraction of a second. The chemical material, which we term the CUT remains, just as a BREAK in a wall remains. We CUT pieces of meat and then serve the CUT, tastely roasted. We can depict this.



But we shall not ~~care~~ to the ambiguity of ordinary language. Instead we shall learn the symbol for a piece of meat.






In all the above examples we have used the outline of a real THING. But apart from this class of symbols, we have two other classes, which depict genuine ACTIONS and genuine QUALITIES. How to handle in these cases our new notion: THING following from, or produced by an ACTION?

Let us take for instance the symbol for to mix  and to add . Obviously the THING indicator on top of them has no meaning. We get however a THING, after we mix or add; we get a mixture and an addition as a result of an ACTION.



We shall see soon, that we may dispense with the double indicator, and place only the THING indicator on top of the symbols to indicate the THINGS mixture and addition. There can't be any mistake. But we can do this only, when we got well acquainted with the symbols and can distinguish symbols which depict a THING (as a hammer or, a knife) from those symbols which depict primarily an ACTION (as mixing and adding).

Similarly we can proceed with a QUALITY (EVALUATION) symbol. But here again, we can dispense with the double indicators for THING transformed or produced by ACTION or substitute another symbol, which depicts the THING better.

				or	
deep VALUE	to deepen ACTION	deepened THING hole, etc.	the Deep abyss, hole		a hole of any kind

Summary: We have seen that many words, as for instance sight, perception, writing, cut, mixture, addition, etc. are ambiguous, in so far, as they stand sometimes for an ACTION sometimes however, for a THING, produced or transformed by this ACTION. In conventional grammar of ordinary language the difference is not marked; on the contrary, both words although fundamentally different, are grammatically the same "thing" a noun. In semantography however, the difference becomes clear and visible.

THE BIG BROTHER OF THE VERB

Something unnecessary in semantography.

"What a remarkable term is "business" especially in America! How is business? Not your business, but business-in-general. Statisticians toil over composite graphs and charts to answer this mythological question. If there is no such entity as "business - and by now we know there is none - it seems a little superfluous to be constantly taking its temperature. Business says. Business speaks. Business recovers its voice. Business views with alarm. Business is sick. Business is terrible. Business runs through a cycle - charming image... This is pure hocus-pocus.

The term "business" and its faithful follower "service" often prevent us from observing what useful or useless things businessmen are actually doing."

Stuart Chase (26)

"SUBSTANCE, Chemistry. Any particular kind of matter, whether element, compound, or mixture; any chemical material of which bodies are composed."

"SUBSTANTIVE, Grammar. (a) A noun. (b) A pronoun, verbal noun, or any part of speech used as a noun equivalent (the good die young; the why is not explained.)"

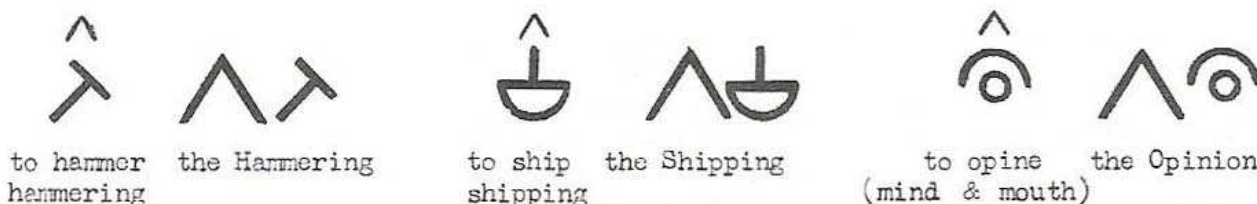
Webster's New International Dictionary (28)

This chapter contains a grammatical notion, which is "unnecessary in semantography", yet from the standpoint of semantics, it is highly important to be acquainted with it. We must deal with this notion, otherwise the critics may say, that semantography is unable to express this nicety of literary speech: the verbal noun or worse, the substantive.

When we say: he hammers, he ships, or he is hammering, he is shipping, we use a simple verb form. However, when we say Hammering needs strength, or The Hammering needs strength or Shipping looks bad, we have elevated the verb to the status of a noun, primarily intended only for those words which stands for THINGS with a substance, a hammer, a ship. In terming the verbal noun a substantive in conventional grammar, it has acquired a ghostly "substance" of its own.

As verbs they have to serve their masters, the agents, in sentences like Man hammers metal, Man ships goods. Now they become their own agents. Not Man needs strength to hammer, but The Hammering needs strength, as if The Hammering would be a creature which needs something. Shipping looks bad, is another example of objectified ACTION.

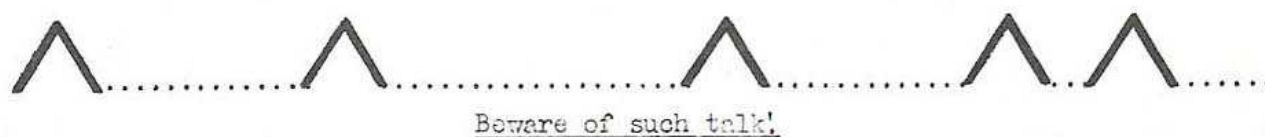
This grammatical inflation of the verb may be termed an exaggeration, and we will show this in a geometrical exaggerated symbol. We have expressed the verb sufficiently by using our little ACTION indicator. Now we shall have to exaggerate this indicator geometrically, to indicate the verbal noun.



In the foregoing page the word Hammering has been written with a capital letter, to mark it as a verbal noun and to distinguish from the little brother the infinitive (verb) which is another unfortunate grammatical term. What is meant is not infinitive action, but the expression of continuous action. However, in semantography there is no difference between the meanings to hammer and hammering and both are expressed by putting the little ACTION indicator on top of the symbol.

The exaggerated ACTION indicator, big and broad as it stands, should warn us. If an economist speaks of the Shipping Situation, he uses the verbal noun as a sweeping term which covers everything, not only a particular ship, a particular line, no, it covers all ships, all lines, all the whole trade, and of course, he knows all about it, although he may live 2000 miles inland. When he ventures to opine, it is only his mind and his speech organs, which are involved, but when he speaks of General Opinion, American Opinion or even World Opinion, tell him frankly to go to hell. He is exaggerating beyond measure. He thinks preposterously that he knows what is going on in the minds of all the people of the world, and that he is the expert, who is able "to feel the pulse of World Opinion"

Semanticists call this kind of talk "objectification". This semantography should enable us to recognize quickly those objectified verbal nouns. Translating such utterances into semantographic symbols would give us lines, in which the exaggerated ACTION symbol will be clearly visible



A few people may be experts in their special field, other people may "honestly" believe what they write, without being aware that they are exaggerating their own ability and knowledge. But there are writers who lie deliberately to foster some political end. And the unwary reader believes it being misled by such vague words.

In civilized countries primary education is compulsory and the children are told how to add and how to subtract. Consequently crooks have difficulty in putting over a false mathematical calculation on people. We learn grammar in school, however with little practical effect. In conventional grammar the verbal noun, the substantive is a highly respected member, equal in importance and as "real" as the nouns which refer to "real" tangible substance. We are not told to beware of such words, but it would be better for all of us, if we were told, and were given a method to recognize them.

If the verbal noun is used as a mischiefmaker on trustful humanity, no words are strong enough to tell about the untold misery which have been brought upon mankind by the adjectival noun, the big brother of the adjective.

(196)

THE BIG BROTHER OF THE ADJECTIVE

The adjectival noun, the substantive without a substance, a linguistic conception, which caused the death of untold millions of human beings and the devastation of whole countries.

"Take the word "bad". It probably arose to express a vague feeling of dislike. Rather than go to the trouble of describing the characteristics one did not like in an animal or a plot of soil, one said, "it is bad". All right, a useful short cut. Then the word was made into a substantive, "badness". At this abstraction level, it became something ominous and menacing in its own right. One had better not be associated with badness. Badness was incorporated into rigid standards of judgement, especially moral judgement. "This girl is bad". The statement implies that she is wholly bad, a veritable chunk of badness. But she may also be a charming girl, kind to children, kind to her parents, and perhaps overkind to her young man."

Stuart Chase (26)

Primitive man's unarticulate cries of pleasure or pain were the forerunners of the adjective. But adjectives are always "attributes" attached to the words, which stand for the real THINGS, good cave, bad wolf, hot fire, cold snow. They qualified the nouns.

Came the philosophers and thought very hard about these human EVALUATION words. They didn't rest until they dissected the EVALUATION from the real THING and made them independent. They were elevated to the level of a noun, a substantive and so with a "life of their own" they exerted their own peculiar influence.

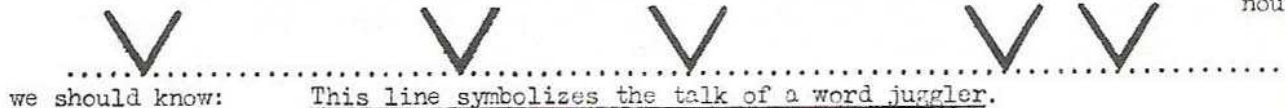
good.....advanced to.....goodness
 bad.....".....badness,
 right.....".....righteousness
 wrong,evil.....".....wrongness,evil
 hot.....".....heat
 beautiful.....".....beauty
 long.....".....length

Now philosophers and moralists could start to muse over "badness in itself" dissociated from the real THINGS and the real ACTIONS. Untold thousands of books have been written about the Good, the Evil, the Beauty, the Sublime, until the simple people believed that these sweeping words referred to something real and concrete. Apparently it did not become obvious that people could not agree as to what is Good and what is Evil (although they could agree about the difference between a stone and an apple) and soon, they started to massacre each other and brought war and misery about each other.

We are aware that the adjectives refer to human EVALUATION only, which is different for different individuals. The adjectival noun is a grossly inflated adjective and consequently we shall exaggerate our little indicator to depict this grammatical notion.



If we "translate" certain talks and writings and find the big EVALUATION, the adjectival noun



we should know: This line symbolizes the talk of a word juggler.
 Only a word juggler could maintain these "cones" in that precarious labile position. They represent grossly inflated Value words, indicating Value, Value, Value, relative in

meaning, evaluated differently by different individuals and unstable in meaning. These symbol cones will instantly "topple over" when their meaning is tested, by the physicist, the physiologist and the psychologist.

Do we need these words in our language? No, they are of no practical use and the positive emotional result by their employment in lyrical poetry, is offset a thousand times by the destructive results produced by some moralists of all languages.

Instead to say: The length is 20 inches, we may say: 20 inches long

" " " She has Beauty " " " She (is) beautiful

In reports on semantography we should refrain from using such grossly inflated EVALUATION words, and the semantical advantage of our geometrical symbol, the precarious labile cone position, should warn us, about the lability of such meanings.

We have found yardsticks to measure long and short, equally valid for different people. The great painters have used such yardsticks to find out the mathematical and geometrical proportions, within which a face will appear beautiful or ugly.

In later chapters we shall see, that semantography may be of help in finding yardsticks for good and bad, equally valid for different people.

A B S T R A C T I O N S F R O M A H A M M E R

"Adverbial derivatives are troublesome to a foreigner for two reasons. One is that the suffix -ly is occasionally (as originally) attached to words which have the characteristics of nouns, e.g. in manly, godly, or sprightly (originally sprite-like or fairy-like). Unlike happily or firmly, such derivatives can be used in front of a noun, as in Shaw's manly women and womanly men. Another difficulty for the foreigner is that the adverbial flexion -ly is disappearing. Such expressions as to suffer long or to run fast are good Bible English... If we accept the expression to run fast, we ought not to resist come quick... English has never been consistent about this custom. It is at best a convention of context, and the complete decay of the adverbial derivative would be a change for the better. Americans are more sensible about it than the British."

Frederick Bodmer and Lancelot Hogben (5)

What is an adjective? A QUALITY, VALUE or EVALUATION word qualifying a THING
a sharp knife for instance

What is an adverb? A QUALITY, VALUE or EVALUATION word qualifying an ACTION
To cut sharply for instance

You see: an adjective and an adverb are principally the same: an EVALUATION word.

Now, we can distinguish between "genuine" and "derivative" EVALUATION words.

We had some "genuine" EVALUATION words before: good, bad, beautiful, ugly, sharp, blunt.

We have realized that people can differ very harshly about them, even whether a knife is "really" sharp or actually blunt. But in some cases danger arises, when we attach the EVALUATION sharp not to a knife, but to something else. How about the EVALUATION: a sharp tongue. People can come to blows about this, can't they?

Now you see why we termed these words human EVALUATION words. These EVALUATIONS are not found in the real world. They emerge from within our mind, and each mind differs from the other minds. Human EVALUATION words are relative in meaning, are unreliable.

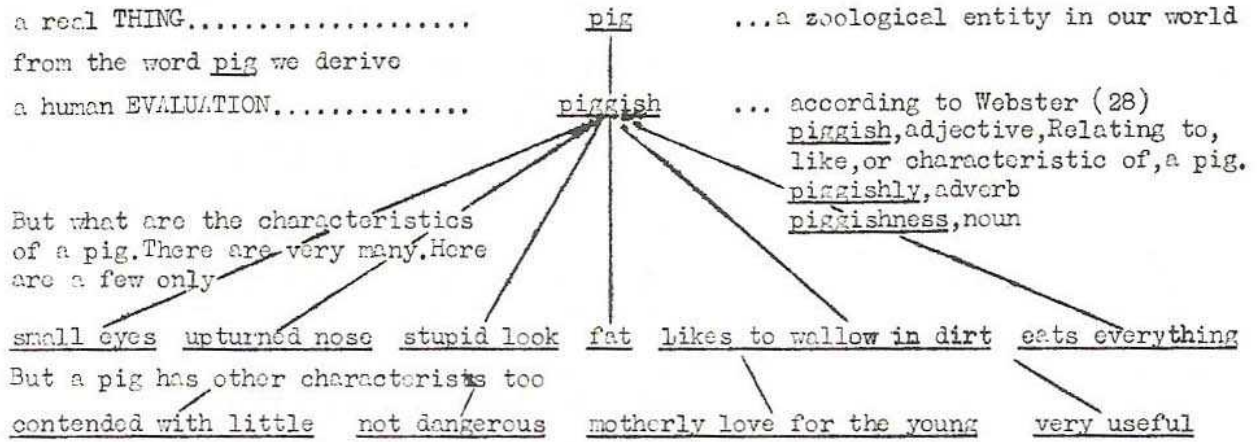
Now, what is a "derivative" adjective or adverb? It's an EVALUATION word, which is not "genuine" like the ones above, but it is derived (therefore "derivative") from a THING or ACTION word. Take for instance

a real THING a hammer. The derived QUALITY word is hammer-like (hammerly, hammerish)
a real ACTION a hammering. " " " " " hammeringly

Now, where is the danger in such human EVALUATION words? Usually there isn't any. But the fact is that we never use these words in connection with the "parent" word. We never say a hammer-like hammer, I hammer hammeringly, a tongue-like tongue, a piggish pig.

PIGS IS PIGS, BUT WHO IS PIGGISH?

Let's take the EVALUATION piggish. It stems from the parent word, indicating a real THING..... from the word pig we derive a human EVALUATION.....



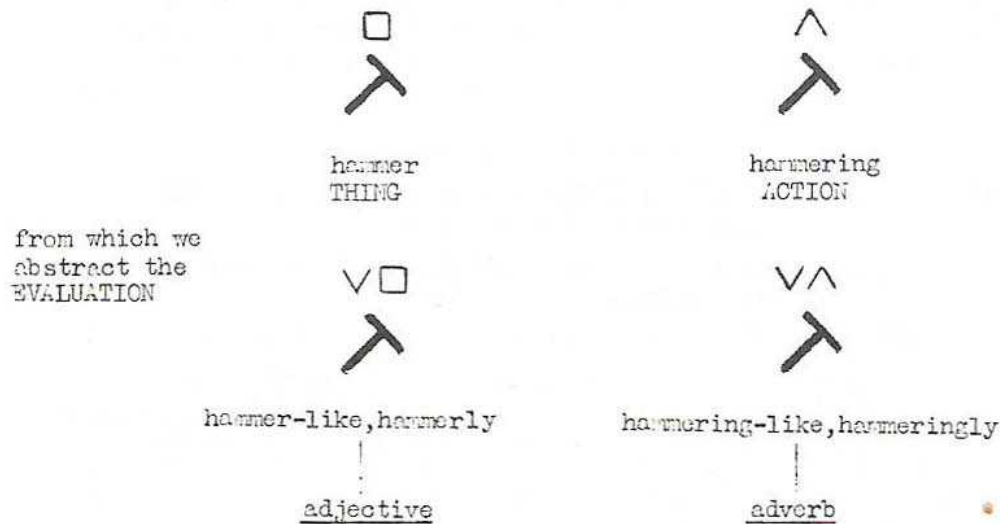
But a pig has other characteristics too
So what do people actually mean when they EVALUATE a person by saying:

She is a piggish person. She acts piggishly.

or the inflated noun Such piggishness.

Apparently, people using such words, have made an EVALUATION in their mind of one or two characteristics of a pig and have attributed them to a person. If one person referred only to the small eyes, the accused person may believe that the reference is made to quite another characteristic: wallowing in dirt. Blows are likely to fall.

Having now seen, that the genuine, and the derivative adjective and adverb are human EVALUATION words which should better be avoided, we may now examine the position in regard of the appropriate symbols, always bearing in mind, that we should not use them. Lets take the hammer as example.

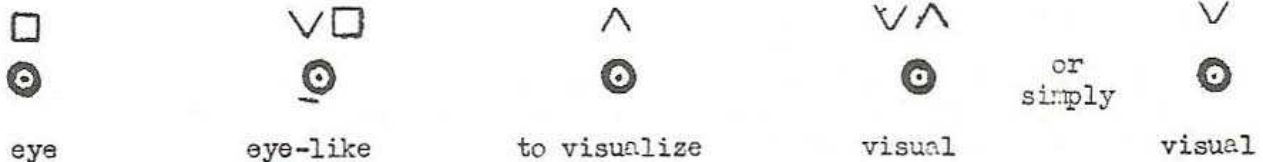


Having made these distinctions, we should reassure ourselves that we shall not need them (because in a sentence we can easily distinguish whether the QUALITY is attached to a THING, in which case it is an adjective, or to an ACTION, a verb, in which case it is an adverb); furthermore we should not use these EVALUATION words, (because they are very vague in meaning). If we say: this is a hammerlike apparatus, we better say in clear words to what characteristics (VALUES) we actually refer. Is it the shape, the hardness, or what else. If we say: He beats hammeringly, what do we mean? The regular intervals, the equal blows, the deformation he makes, or what else?

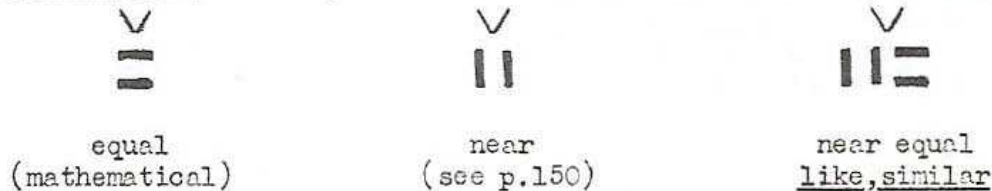
Hammerlike, or hammeringly may look quite harmless. But we never say a hammerlike hammer. The mischief is done, when we attach this human EVALUATION to quite a different THING, for instance a hammerlike candy, because we think in our brain only of a few characteristics of the hammer and leave out other characteristics. (Korzybski, see chapters on semantics)

The hammerlike candy may have the shape and colour and surface of a real hammer, but not its hardness, and a child who grips it, and try to perform a hammering-like ACTION would soon smear itself and the furniture with chocolate.

As said before, the distinction between THING-QUALITY and ACTION-QUALITY will not be necessary in semantography. With many words, this distinction is absent. To observe, observingly refers only to the ACTION. But even the use of the word observingly is unnecessary in semantography. We could say, he looked observingly. Both words carry the eye symbol. So why the repetition, which is unnecessary? He observed is quite sufficient.



Now, the QUALITY word visual refers to the whole ACTION of seeing. Similarly, the QUALITY word eye-like should refer to an organ, able to perform the ACTION of perceiving light. Such word could only be used by a zoologist, describing such an organ of a particular creature. But we are not allowed to use this distinction, if we only want to say: shaped like an eye. If we mean only this characteristic, let's say so: shape like an eye, or shape similar to an eye. This will lead us to the symbol for like, similar



The symbol for shape may be found on page 153.

Now, the word equal must carry the human EVALUATION symbol, except in mathematical calculations. What is equal, what is near, and what is near equal, like, similar is an EVALUATION, different in different brains. As soon as we are aware of the dangers of such words, (about what is similar or what is not similar, let us say, in a political debate for instance), we are a step nearer to sanity in speech.

Today political opponents rage about the similarity or non-similarity of political events in two different countries, and the audiences will listen reverently. Yet, what one speaker considers similar, is his own EVALUATION only and refers only to one system of reference, his own brain. His opinion is just as relative as the opinion of the other observer, whose mind considers the political events not similar at all.

As soon as we are aware of the vagueness and relativity of such adjectives and adverbs, debates of such kind will fail to make any impression on us.

NOTE TO THE READER.

The following chapters refer to modern theories in Physics, and their relation to every-day language. If you have no training in Physics, don't be afraid and don't skip these chapters. You may find, that these theories, seemingly incomprehensible to the simple man in the street, are basically simple. If said in simple words, they should be understandable to everyone. So don't skip! Read on!

PHYSICS IN LANGUAGE

The Theory of Relativity.

The Theory of Energy Quanta.

The Theory of Energy-Mass Conversion and

The Dual Aspect of Matter.

"Man, is constantly handicapped...by his muddled way of thinking. May it not be that much of this unreasonable muddle is due to the simple fact, that our symbols for thought language are not yet set in order; that in the matter of thought symbolism we are still much in the same state of confusion, as the Romans were in their arithmetic, before the introduction of the "Arabic" numerals?"

Richard Paget (3)

"The Einstein theory is indeed such a tremendous structural linguistic achievement that quite probably its full semantic significance and meanings will not be worked out for many years to come."

Alfred Korzybski (56)

"Non-scientists often meet new experience without humility, in an arrogant determination not to be caught napping. They jeer at Fulton's steamboat, laugh heartily at a horseless carriage operated by gasoline, presently they are going to tell you that semantics is nonsense."

Stuart Chase (26)

"The explanatory crisis which now confronts us in relativity and quantum phenomena is but a repetition of what occurred many times in the past... Every kitten is confronted with such a crisis at the end of nine days."

P.W. Bridgman (65)

"I always took it for granted that the science of language...is one of the physical sciences, and that therefore its method ought to be the same as that which has been followed with so much success in botany, geology, anatomy, and other branches of the study of nature."

Max Mueller (52)

"The scientists above all others have won agreement. With it has come an incomparable advance in knowledge, in incomparable opportunity to provide material well-being for every member of the race. The knowledge works. Can we follow the discipline...and find agreement in the more troubled and perhaps more complicated fields of social and economic affairs?"

Not unless we can talk clearly. Good language alone will not save mankind. But seeing the things behind the names will help us to understand the structure of the world we live in."

Stuart Chase (26)

The critical reader is kindly asked to exert his utmost benevolence towards the coming chapters. He may consider them as a joke, as an attempt to bring a little hilarity into dreary chapters on grammar, or at best as an aid to mnemonics. Mnemonics is the name for a method to remember things, simply by connecting them in some sort of way (no matter how ridiculous) with some other farflung matter, with which they have some remote resemblance.

For instance, repeated mention has been made in previous chapters, that words written in symbols look like a chemical formula. And the resemblance with chemistry goes even further, because a symbol compound denoting the meaning of a word, is a combination of symbol elements. And just as in chemistry - the amount of symbol elements, essential in semantography, is around one hundred. And the joke has been carried further by asserting that - just as in chemistry - some symbol compounds reveal the inherent structure of meaning and in some cases, the inherent danger of that meaning.

Well - after the joke has been made and has found its mark - or not - there remains a feeling that - after all, there may be a little connection between symbol writing and chemistry.

Chemical symbol compounds are symbols for the things of our world - and the symbol compounds, developed in this book are just the same - symbols for the things of our world.

Well, if both kind of symbols stand for the same things, it may only be natural that we might assert some sort of similarity.

The philosophers and scientists of all ages have striven hard to discover the one supreme law, which governs the whole universe. The last century and especially the last decades have shown that the dreams of philosophers of bygone times have not been only phantasies, but that their hunch was correct. Today every student of physics and chemistry knows that heat, light, radio, electricity, magnetism, etc. are different aspects of one phenomenon and now energy in general and even chemical matter has been added and recognized as just other aspects of the same one phenomenon. How about the "spirit", "about" thought" and "language"? Should these phenomena be exceptions of the one supreme phenomenon?

In a foregoing chapter (p.162) there have been some indications of a possible similarity. Some experiments have shown that such a similarity may exist, however faint. What does this mean?

If the brain of man works according to that supreme phenomenon of nature, then the languages which man has evolved to describe nature must be somehow similar to the structure of nature. We should then not be surprised to find in the structure of language certain principles of nature, which have been discovered only recently, as for instance the principle of relativity and the principle of energy quantum. Man, in bygone times, must - in some sort of "instinctive" "imagination" or "inspiration" - have used words in a way which follow these principles of nature.

Let us be reminded, that some Greek philosophers have propounded - without experiments - the atomic structure of chemical matter, more than 2000 years before modern experimental chemistry proved this to be a fact. Other Greek scientists evolved the theory that the earth is a sphere suspended in space, and rotating around the sun - in spite of the fact, that - for everyone to see - the sun crossed the sky every day. There is every reason to believe that the same ideas originated in the brains of wise men, thousands of years before the Greek era. Unfortunately however, we have no records of those bygone scientists.

To explain all this, we have invented some words, like "instinct", "imagination", "inspiration", "revelation", etc. These words explain nothing. They only point to the possibility, that the principle of nature, the structure of the universe makes itself apparent not only in the circling of the stars, the circling of the electrons, but also in the brain of man, composed of such circling stars. But how? We don't know.

Do "ideas" come from the depth of the universe or do they originate in the chemical cells of the brain? You have to be a chemist to realize that these chemical reactions are utterly beyond the chemistry we know.

NOTE: In the following three chapters a short explanation of the theory is given, as far as it coincides with the analogous view regarding language. The explanation is such as to be understood by everyone with primary school education.

Some readers may think, the explanation is an oversimplification. Very well, although this very word is a noun, composed mainly of two human EVALUATION words over and simple. What "is" simple, and what "is" oversimple, may be evaluated differently by different people.

At best, the critical reader may consider the coming explanations as analogies, with the single aim to help our understanding of the working of words. We know from the history of inventions and discoveries that sometimes analogies have led to new ways, which have been fruitful in the end.

RELATIVITY OF OBSERVATION

"Einstein...in seizing on the act of the observer as the essence of the situation, is actually adopting a new point of view as to what the concepts of physics should be, namely, the operational view...if we had adopted the operational point of view, we would, before the discovery of the actual physical facts, have seen that simultaneity is essentially a relative concept, and would have left room in our thinking for the discovery of such effects as were later found."

P.W. Bridgman (65)

The reader may read again the chapter on page 144, THE RELATIVITY OF SPACE which contains some explanation as to the conception of "straight" in our "curved" Space-Time continuum, etc. He may find also some lines in the chapter on page 105, THE RELATIVITY OF TIME. In this chapter we shall deal only with the relativity of observation.

Let us suppose five observers, stationed in different spots, and observing the loop of an airplane. One observer is stationed directly beneath the airplane, another far away in the plain, the third on a hill, the fourth on a high mountain, etc. The airplane flies high up in the sky. The observers operate photographic cameras, to exclude any error of observation.

The pilot loops the loop. Afterwards, the observers report their observation. The one beneath, reports that the airplane went into a straight line. The other saw an ellipse, the fourth on the high mountain saw the airplane making a perfect circle. And their cameras prove, that they all are right, although their observations differ. But can they all be right?

They are right only with reference to their point of observation. Their observation is related to that point. Their observation is relative.

Fortunately these observers have been to primary and secondary school. They know a little of geography, mapping and geometry. They will soon discover, why all their observations differ, and they will soon agree on some formula, which would suit all observations. In this formula, the territory from which they made their observation is constant. The relative distances between all observers remained the same. The territory didn't change and the observers didn't move.

If the five observers would be positioned on five ships, all moving with different speed in different directions, the difficulties would be greater. But if they would observe the ships movements, by determining the directions, the position of the sun, the speed of movement, they again could find a formula on which their different observations could be based. Their common system of reference would be the earth.

But suppose the five observers are in five different airplanes, flying in different directions when observing that airplane. Moreover a mist covers the earth, the sun, anything. No common system to which to cling. Still there is the gravitational pull, which all observers feel and measure, and which could give them some notion of the nearness of the earth.

Now, instead of airplanes, which have visible head and tails, the observers travel in spheres, like those of a stratosphere balloon. And the observed thing is also a sphere. But now, they are all far away from any celestial body, travelling in empty space, with nothing to refer to, except their own sphere. Every observer has no possibility to ascertain whether his sphere is at rest or actually travelling with uniform velocity. If he sees the sphere of another observer drifting by from right to left, he does not know, whether his eyes and cameras do not deceive him. It may well be, that the other observer is at rest (not drifting at all), and the first observers drifts. Remember a similar observation, when sitting in a railway carriage at a station, and the other train starts to move. You think your train moves, when you look out from the window.

Well, this is exactly the situation in which we find ourselves on this earth in relation to the whole universe. We travel with the solar system, and all the stars travel too, and there is no fixed post rammed down some spot in space, of which we can say: "this post is absolutely at rest. Let us take it as a common point from which to measure." Having not such a common "constant" we must resign to the conclusion, that all our observations are relative, and only valid for our system of reference.

Einstein, after showing us, that all our observations are relative, that we are even unable to state, whether events on two different spots happen at the same time, although we could swear and our cameras could prove it that they happened at the same time (but the spots may move and light from them need time) - Einstein, telling us that all our measurements and observations are unreliable and relative, gave us back a little of the confidence we had lost. He proved that there are still some constants in this universe of ours, which are the same and equally valid for any observer. Such a constant for instance is the speed of light. Einstein built up so-called invariant formulas of the laws of nature, which are equally valid for any observer.

Footnote. The above lines are actually only the beginning of an explanation of the theory of relativity. The whole trouble started in the eighties of the last century when the two scientists Michelson and Morley started an experiment. Light travels with the velocity of 186,300 miles per second. If we have a lantern at rest, and send out a beam of light, this beam would travel with the speed of 186,300 miles. Suppose now, we set the lantern in motion and let it travel with a speed of 10 miles in the same direction, and now we send out another beam of light. Obviously this beam will now travel with a speed $186,300 + 10 = 186,310$ miles. The situation would be the same as throwing a bottle out of the window of a train in the direction of the engine. The bottle will travel with the speed of the train + speed given by throwing = Sum of both speeds. But Michelson and Morley failed to find any additional speed of light. The conclusion was, that the speed of light is a constant, independent of any speed of the light source. This conclusion threw the physicists in an upheaval and Fitzgerald offered an explanation, which was considered crazy; the travelling lantern becomes shorter when travelling. Lorentz did a sensible thing. "We can't alter nature, and if our formula of the addition of two speeds (bottle and engine) doesn't work for light, we must evolve a new formula to suit nature." This he did.

Now, light, as we know, is electricity in motion. The Lorentz formula evolved for optics and electrodynamics (electricity in motion) were accepted. Came Einstein and used this formula not for light and electric charges ^{only} but for any moving body in general, let us say, a billiard ball, although a billiard ball has nothing to do with electricity in motion. He gave his paper in 1905 the somewhat contradictory title: The electrodynamics of moving bodies.

Applying the Lorentz formula to moving bodies in general, Einstein came to conclusions, which threw the whole world in confusion. According to the Lorentz formula things in space becomes shorter, and time slows down, on a moving body. Suppose an observer travels in space and has before him a table one foot long. In his hand he has a foot ruler to measure the length of this table. It is one foot, all right. Now the observer travels with the table, in the direction parallel to the measured edge of the table. When he reaches a speed of 161,000 miles per second, then - according to the formula - his table would have shrunk to one half foot. He takes now his foot ruler to measure the shrinkage of his table. Will he find now the half length? No, he wouldn't. because his foot ruler would have shrunk too to half a foot, and, according to his observation, he would find still the table one foot long, and he would be unaware of the shrinkage. Well then, who would notice the shrinkage? Only another observer who is at rest, seeing the first observer flits by at terrific speed. But funny enough, the first observer would think the second observer is moving at terrific speed in the other direction. None of both could say who is at rest and who is travelling. And the first observer, believing himself at rest, would observe that the table of the second observer has shrunk to half the length. Both observers would somehow deceive themselves. Both observations have no absolute value and are only relative.

And so we are back at our subject, the relativity of observation, and with this we may conclude these explanations, which may be termed a simplification of some aspects of the theory of relativity.

RELATIVITY IN LANGUAGE

"Long" and "short" are terms showing relations, usually relative to a man. Thus "Length" is not something which an object possesses as a man possesses a shirt; it is a word in our heads. Its meaning is determined by what we do, rather than by what we say and the concept shifts with our doing."

"Beyond our skins are only things - moving, still, vital and less vital, changing behaving. The "capitalisms" and "principles" are created in our heads by language and by language are objectified. The most powerful microscope cannot find them."

Stuart Chase (26)

"Indeed we can now definitely state that no two human beings, with the single exception of the members of pairs of identical twins, are biologically equal in the sense of possessing the same genetic constitution, so that biological difference is, for all practical purposes, universal."

Julian Huxley (66)

"Each mind has its own method."

Emerson

Now, let's examine the language of the two observers which we met in the foregoing chapter. As explained they are suspended somewhere in empty space and pass each other with a speed of 161,000 miles per second. According to the Lorentz formula, at such speed, things shrink to half their length. Every observer would not become conscious of this shrinkage, because his ruler would shrink too, and he would still measure 1 foot. However the other observer would see the shrinkage, as the first observer pass by. Now, both observers don't exactly know who is at rest and who travels. There is no fixed post in the space of our universe. The first observer would believe himself at rest and would think the other observer flits by. The other observer would think that he is at rest and the first observer travelling. Somehow, say by radio, they could speak with each other.

First observer: "Hello, I saw you just a few seconds ago. You passed by from left to right with the terrific speed of 161,000 miles per second."

Second " "You are wrong. I was perfectly at rest. I saw you passing by from right to left at the speed you mentioned. And you and your table looked funny. I measured your table supposed to be 1 foot long. It has shrunk to half the length. And you yourself, ha ha, you too shrank in width. You looked as if a steamroller has passed over you. Ha, Ha!"

First observer: "You are wrong. Everything was all right with me. You looked so thin and flattened and your size has shrunk."

Second " "That's silly."

First " "You are silly. I am perfectly all right."

Einstein: "Gentlemen, please! Can't you come to an agreement?"

First observer: "I am absolutely right. He is wrong!"

Second " "No, I am absolutely right. He is wrong!"

Einstein: "Gentlemen! You both are right and your observations are right too, but not absolutely. Your observations are relative to your system of reference. Your belief that you are at rest and the other travelled is relative. As soon as you get this idea of relativity in your head we could come to an agreement, and find out what really happened."

The reader, who never dipped into books on the Theory of Relativity may be very puzzled by the above explanation. But other readers know that all books, which try to explain the Theory are full with observers on trains, or along a rail track, or on a rotating disk or in rooms suspended in space, all of them equipped with measuring rods, clocks, apparatus to give light signals, and they are all arguing who is right in his observation and who is wrong. And the notion of the system of reference plays a great part in all this arguing.

How can we extend the analogy to our daily speech?

Firstly: We must realize that each person who thinks, feels, believes, etc., etc. does all this with his system of reference, his body and his brain. Americans have a special slang for this. "I got^{to} into my system" they say.

Secondly: Now to Biology. Not two human systems are alike. This biological fact you can observe everywhere. Human beings differ from each other.

Conclusion: "Every word and meaning, referring to an activity of a human system is only relative in meaning and valid only with reference to that human system."

Such words and meanings become clearly visible in the symbols of semantography. The particular system of reference is expressed by a particular symbol. Here they are.

The symbols for the human system of reference



1st mind symbol

2nd mind symbol

3rd mind symbol

mouth symbol

ID

EGO

SUPEREGO

SPEECH

emotion

reason

conscience

language

Words carrying these symbols of reference are referring to what's on your heart, on your mind and on your tongue, and all this has only a relative meaning.

Such words are for instance opinion, doubt, certainty, belief, reason, logic, moral, conscience, good, bad, right, wrong as well as a host of thousands of words including democracy, fascism, communism, capitalism, and any -ism in general, as well as the words freedom, dogma and dogmatism, progress and reaction, wisdom and balderdash and even science and pseudo-science.

All these words written in semantography carry one of the above symbols, indicating a human system of reference, never perfectly alike to another human system of reference. What one brain terms wisdom, another brain may term balderdash and the fight of what "is" science and what pseudo-science is going on in many minds. Who is right?

As soon as we are aware, that none of us can be perfectly and absolutely right, we may come together to find agreement.

Hendrik Willem van Loon defined the meaning of Tolerance as a feeling, that you may be perhaps wrong, even if you feel that you are absolutely right. If all men would feel like this, we would have tolerance on this planet. It is exactly what we are all crying for. Now look up the symbol for tolerance on page 179, as derived from the meaning of tolerance used in engineering.

Whenever you see one of the above symbols, you should know that they refer to the brain of the writer, which differ with other brains. Moreover you should be aware, that the writer himself, is never sure as to whether to employ the ID, EGO, or SUPEREGO symbol. Look up the chapter THE RELATIVITY OF MIND (page 180) and the dialogue between Bertie and Wodehouse's Jeeves (page 170).

Now to other symbols of human organs, symbols of a human system of reference.



eye symbol
for

ear symbol
for

nose symbol
for

hand symbol
for

SEEING sense

HEARING sense

SMELLING sense

TOUCHING sense

We heard a lot on the relativity of observation. Relative in meaning are other words too, like beautiful, ugly, harmonious or cacophonous; some women like perfums which some men can't stand and people term some dishes tasty, which others term dreadful. And so on with all other words pertaining to our senses, including the sense of touch.

THE DISASTERS OF HUMAN MINDS ARE HUMAN EVALUATIONS

In the foregoing paragraphs we have dealt with SENSE REACTIONS and all words pertaining to them. From previous chapters we know, that this group is a part of the group of HUMAN EVALUATION.

We have divided all words of all languages as falling into one or more of the three great groups (besides words for SPACE, TIME and numbers)

THINGS
chemical

ACTIONS
physical

EVALUATION
human

This third group is symbolized in semantography by the indicator V (Value)



indicator
for
human EVALUATION words
adjective, adverb



indicator for
grossly inflated
human EVALUATION words
adjectival, adverbial noun

All words carrying these symbols fall in this class. Not only the adjectives good, bad, beautiful and ugly, but also their inflated nouns goodness, badness, beauty, ugliness, as well as long, short, far, near, high, low, big, small, also length, shortness, etc.

Then there is the great amount of adjectives, derived from THINGS as man-like, manly, pig-like, piggish, hammer-like, etc. etc. the derivative adjectives. They refer to abstractions which we make in our mind of a few QUALITIES of a man, a pig, a hammer. They too are therefore human EVALUATION words.

In the same class fall the adverbs, which are the adjectives of the verb, the ACTION words, as for instance breaking-ly, gripping-ly, commanding-ly, hammering-ly. They are usually not employed to qualify the ACTION of breaking, gripping, commanding and hammering. They are usually attached to some other ACTION. He repeated his sentences hammeringly. His words fell hammer-like. People might disagree about such a EVALUATION, might find that the speech was dreary and monotonous. Another human EVALUATION, further inflated by the use of the nouns dreariness and monotony.

Sometimes the derivation might be made from the ACTION of a THING. She acts like a pig. She acts piggish-ly.

We have already spoken of the danger of such words and we formulate a rule

Words, which carry the symbol for human EVALUATION are wholly relative in meaning, they are unreliable, they have different meanings for different people. Beware!

Is there someTHING in these words which is "common ground" for all observers, like the earth is common ground for the observers. Is there someTHING constant in such words? Yes, the THINGS outside our skins. A man and a pig are zoological entities and real.

Let us write down the symbol for bad man. It means a man, (eValuated) bad (see p. 179)



All these words are the synonyms of the heading BAD MAN on page B of Roget's Thesaurus (67) and they represent only a selection. The list contains some 50 words more.

All these words refer to^a zoological entity of our world, well defined and beyond argument, namely: a human being, and secondly to an EVALUATION, unreliable and varying in meaning with different individuals.

This symbol exemplifies the symbol economy of semantography, which has been initiated by Ogden's Basic English, who proved that extreme word economy is possible.

Some readers may say, that a man, who has been convicted of breaking the law, may rightfully deserve one of those titles. True enough, although what may be allowed in one country, may be prohibited in another country, and we know the instances under which even murder is sanctioned, although called by other names.

But we are mostly concerned with our daily speech and thought, and from this point of view, we must agree, that such words as listed above are used not against "convicted criminals" but against people in the political arena, or even against the neighbour.

Take the words BAD WOMAN. In many countries a woman who gets a child "illegitimately" (another human EVALUATION word) is qualified a BAD WOMAN. But there are places even in Central Europe, especially in the country, where such a judgement is incomprehensible. In some countries, the farmer boy would marry a girl only after she had an "illegitimate" child from him. He wants to be sure that he will have sons and daughters, who could run the farm when he is old. From this point of view, the EVALUATION of BAD WOMAN makes no sense at all. On the contrary. These country people are very sensible, and even the churchmen show understanding. With other people, and they represent the great majority, the EVALUATION of BAD WOMAN remains, and has caused uncounted misery.

In former chapters mention has been made, that chemical formulas show the inherent structure and the inherent danger.

Now we see how symbol formulas show similarly the inherent structure and the inherent danger. All words carrying the SENSE and EVALUATION marks can cause misery.

A chemist knows how to handle chemicals, and even dangerous ones. And this semantography is designed by a chemist to teach the people the chemistry of words. If we learn to recognize words of this type, we can learn how to handle and how to dispose of them, without damage to anyone concerned.

THE QUANTUM OF ENERGY

"Rather against my better judgement I will try to give a rough impression of the theory. It would probably be wiser to nail up over the door of the new quantum theory a notice "Structural alterations in progress - No admittance except on business", and particularly to warn the doorkeeper to keep out prying philosophers."

A. S. Eddington (50)

"Socrates followed Pythagoras in believing... that mathematical truth were divine and illustrated the nature of the mind of God, a view that has been advocated to some extent by modern mathematicians."

C. E. Kenneth Mees (10)

In a foregoing chapter (p. 201) mention has been made, that Greek philosophers evolved the atom theory without any experiments. They somehow reasoned it out. They wondered what would happen if we try to divide a grain of salt into smaller and still smaller bits. In theoretical thinking this dividing could go on and on. If we think that we have now arrived at the smallest part of salt, we could - in our brain only - think, that we could theoretically divide this smallest part in still smaller parts. So there is no end to this.

But if we divide and divide we should arrive at particles which fast approach zero, and as there is no limit to our dividing we should arrive at zero, which means nothing. However, a grain of salt can't be build up by trillions and quadrillions of nothings. So, such a reasoning must be abandoned. It must be abandoned, because it leads nowhere and to nothing.

The atomic theory of matter has led to great discoveries and understanding into the nature of things. We all have been to school and remember the chemical models, little wooden balls connected with bits of wire. Each little ball represented an atom, and showed us how complicated chemical compounds are composed.

In the meantime we have advanced a little and atom scientists have succeeded to split the atoms with gigantic voltage generators and cyclotrons, but again the wonderful simplicity of full numbers 1 2 3 4 5 6 7 etc. have been found. Today scientists are more than ever convinced that matter is built up in successions of full numbers 1 2 3 4 5 etc. and they use exactly the same cubes and balls, which children use in their play to explain the isotopes, the various mass numbers, the atomical numbers. Niels Bohr, the disciple of the great Rutherford, delights in playing with marbles (which, no doubt, he bought in a toy shop) to demonstrate why 1 neutron will pass through an atom containing 2, 3, 4, or more protons and neutrons (68).

It is no accident that atom scientists use the same simple marbles and cubes which children use. The basical simplicity of our universe is revealing itself more and more to our wondrous eyes. A scientist said: Nature has kindled a light, the human brain, to reveal little by little its secrets. A wonderful statement, But "who" is "Nature"?

The hunch of the Greek philosophers, the UNIT of MATTER has now been proved. But how about the UNIT of ACTION? Up till now we believed we can push a stone a little, or with even lesser force; just a lesser push, and even less, and less, and less, and less; there is no end to it.

Max Planck has proved that the UNIT of ACTION exists. He compared the results of many experiments and found (similarly like Dalton and Prout) that simple full numbers 1 2 3 4 5 etc. were found in energy measurements. In other words, energy in action does not steadily grow over millions of decimals. Energy jumps in jerks of simple numbers 1 2 3 4 5 etc. The word atom was reserved for matter, so Planck called the UNIT of ENERGY 1 quantum. And so the quantum theory was born at the beginning of this century. It had great effect on all work on atomic physics. The energy used up to push the electrons around in their orbits is used up in simple numbers 1 2 3 4 and no decimals between.

This is the principle of the quantum theory. It is a simple principle, as simple as the mathematics we learn in the first school year. We should not be surprised to find that primitive man, in evolving language, had a hunch about the UNIT of ACTION.

THE UNIT OF ACTION IN LANGUAGE

"We should expect that the action represented by the number 1 would be most interesting and would eventually represent the indivisible atom of action. The modern quantum theory seems to favour such a point of view. When we encounter a pure number having such crucial significance in this world, we should not wonder that such a number intrigues us."

Alfred Korzybski (56)

"Agent - Act - Object. It seems to me that the...sentence...expresses this unit of natural process.....forced upon primitive man by nature itself; it was not we who made it....If it be so universal, it ought to correspond to some primary law of nature."

Ernest Fenollosa (31)

During the foregoing chapters we have learned a lot of ACTION words, moving, travelling, going, speaking, etc. etc. Now we have used the word ENERGY, and we should learn the difference which the physicist makes between these two notions.

ACTION - according to physics - is ENERGY, employed during a time interval. This is a very practical definition. ENERGY employed during no time at all, is no ACTION at all. For practical purposes we may say (forsaking accuracy): ACTION is ENERGY in ACTION. For practical purposes we shall use sometimes in coming explanations the terms: ACTION word and ENERGY word, meaning the same. Thus: moving, travelling, going, speaking are termed ENERGY words, and in fact, energy is employed when doing all these ACTIONS.

"For practical purposes". These words must have exasperated many readers. Semantography is supposed to be a practical system, a practical tool for practical purposes, to be used by practical people.

Instead of, the reader has been fed in the last chapters with difficult theories, which have nothing to do with practical purposes, and have always been incomprehensible to the man in the street.

The author's explanation and excuse is: this is not a text book designed for children or primitive people. It is the first book to prove that such kind of "language" is possible. It should show, that - if the physical and chemical laws of nature are equally valid in every country, we should be able to build a kind of writing on these physical and chemical laws, which writing would be equally valid in all languages of all countries.

Do we need that talk on modern scientific theories in a text book on semantography? No, we don't need it at all. Let's take a "primitive" man from a "primitive" tribe. He has not the slightest idea of decimals. But we could make him easily understand the meaning of 1 coco-nut, 2, 3, 4, or 5 coco-nuts. But how to explain/him the UNIT of ACTION?

Well, suppose we let 1 coco-nut drop on his head from the height of the palm. That would make just 1 hit. To hit and hitting means an ACTION, which he would quickly understand, although somewhat painfully. Now, we let him have 2 hits, 3 hits, 4 hits and 5 hits. It would soon get onto (or into) his head, that 1 hit is the UNIT of ACTION. There can't be anything as $\frac{1}{2}$ hit.

To children in primary school we could point out, that this special ACTION word, takes on - amazingly - the plural, like if it would be a THING. In English, the plural is expressed by adding the -s. 1 coc-nut and 2 coco-nuts. 1 hit and 2 hits.

Do we need any mention of physics or chemistry or any conventional grammar term to explain this. No, we don't. Children would grasp it easily.

But now - in semantography we do not need the notion of the UNIT of ACTION word at all, just as we do not need the inflated ACTION word, the verbal noun. The simple and small ACTION indicator will do the job perfectly.

Why then all the bothering about it?

The answer is: all advanced languages have this peculiarity, the UNIT of ACTION word. In conventional grammar it's a noun, or a verbal noun, just as other ACTION words which do not denote the UNIT of ACTION. Critics may say, that semantography is able to express to hit, and hitting and the Hitting, but not The Hit, or Two Hits. To them, it must be shown that semantography can easily cope with this peculiarity of educated speech.

But above all, these chapters are necessary, because that UNIT of ACTION word behaves very strange. This behaviour is not readily recognized today. Ogden and Richards mention it to be one of the subterfuges, cleverly used for the confusion of meaning (p.191).

In fact, the UNIT of ACTION word changes into a THING word, somehow similarly to the conversion of ENERGY into MASS and vice versa. It's Physics in Language. It seems crazy; but in any case, it won't make drab reading. It will help us to understand how language works.

Before we go into that, let's find the appropriate symbol - although we won't need it in simple reports written in semantography.

Let us suppose the most universal ACTION in our universe; an electron circling around its nucleus, just like a planet circling around its sun.



The ACTION which holds the Universe together

Now, if this is "too high", just let us suppose a child, binding a string to a stone and whirling it around. For the following explanation, this simple picture will do just as well.

Now what words have we to describe this ACTION ?

ACTION word verb, infinitive	inflated ACTION word verbal noun	UNIT of ACTION word another verbal noun
to turn, turning	The Turning	1 Turn
to rotate, rotating	The Rotating	1 Rotat-ion
to revolve, revolving	The Revolving	1 Revolut-ion
to circle, circling	The Circling	1 Circulat-ion, 1 Circle
to cycle, cycling	The Cycling	1 Cycle
to spin, spinning	The Spinning	1 Spin
to gyrate, gyrating	The Gyrrating	1 Gyrrat-ion

In all these cases, the UNITofACTION word means one complete Turn, one complete Revolution, one complete Cycle. It is the UNIT of ACTION, all right. And these words take all the plural form: Turn-s, Revolution-s, Cycle-s, indicating a plurality of UNITS.

Consider this analogy, comparison, metaphor, simile (call it what you may) silly or crazy, but there is no doubt that these words contain the mathematical number 1 and they refer to the UNIT of ACTION, having a far fetched similarity to the quantum unit of which the semanticist Korzybski (56) said, (without, however referring to those verbal nouns):

"We should expect that the action represented by the number 1 would be most interesting and would eventually represent the indivisible atom of action."

Korzybski spoke about the quantum theory and its semantical aspect in regard of sane language. His view point is quite different, but somehow he wants to say the same: "Comprehend the universe as the physicist does, and you will arrive at a language, similar in structure to the universe, a language for sanity." He gave his book the title: Science and Sanity.

Strangely enough, we find this UNIT of ACTION with almost every verb, not only in English, but in most languages. This shows clearly, that man felt it necessary to express the UNIT of ACTION, that - to modify Prof. Fenollosa's words (quoted at the beginning of this chapter) - that it may have been "forced upon primitive man by nature itself"... that it might "correspond to some primary law of nature."

In English, the UNITof ACTION word is expressed in many instances by the ending -ion, like in Rotat-ion, or by the ending -ment, like in advertis-ment, or by the ending -ive, like in narrat-ive, seldomly by the ending -ture, like in signa-ture, mix-ture. In very many cases however, modern English has shed any ending, and has used the stem of the word (with a number in front) 1 Turn, 1 Spin. And this method we shall employ in semantography, because it is the simplification we seek, to express the UNIT of ACTION

And for the critics who want to see the
(inflated) verbal noun:

		or			
to turn	1 turn		1 turn	The Turning	The Turn
Examples:					
mouth	eye		ear	pen	
1 talk, 1 speech	1 look, 1 glance		1 hearing	1 ????????	
1 report, 1 narrative	1 view, 1 inspection		1 audition		
1 tale, 1 say (saying)	1 vision, 1 sight				

We see that the word changes sometimes: speak, speech, see, sight. Sometimes the ending -ing is used: 1 say or 1 saying, 1 hearing and 1 writing. But is there not a UNITofACTION word for to write? Yes, there is: 1 writ, but it came somehow out of use. In the days of old it was used for instance for the Holy Writ. Today a writ means a warrant for arrest.

But strangely enough, the word writ stands not only for the ACTION, but also for the MASS converted from this ACTION, the piece of written paper. And in some sentences such words have a dual aspect, they mean the ACTION and the THING, the ENERGY and the MASS.

ENERGY - MASS CONVERSION
AND
THE DUAL ASPECT OF MATTER

" $E = m.c^2$, an equation which holds generally between mass and energy. This fact has been called by Einstein the law of the inertia of energy. It has been verified repeatedly by experiments, and is one of the most striking structural results of Einstein's theory. The above statement means that the two fundamental notions of 'mass' and 'energy' are equivalent and thus we have a clear vision of the structure of 'matter'. The two older structural laws of 'conservation of matter' and of 'conservation of energy' become fused into one. Mass becomes structurally and verbally nothing else than energy concentrated at a point, and it appears as a form of energy manifestation."

Alfred Korzybski (citing M. Born) (56)

"And yet when I hear to-day protests against the Bolshevism of modern science and regrets for the old-established order, I am inclined to think that Rutherford not Einstein, is the real villain of the piece."

A. S. Eddington (50)

"The concepts of wave amplitude, electric and magnetic field strength, energy density, etc., were originally derived from primitive experiences of daily life, such as the observation of water waves or the vibrations of elastic bodies."

"The problem of quantum theory centers on the fact that the particle picture and the wave picture are merely two different aspects of one and the same physical reality."

W. Heisenberg (69)

On the pages 203 ff it has been said, that two observers who pass each other at the enormous speed of 161,000 miles per second, would observe on each other that space dimensions in the direction of the movement, as for instance the length of a table would have shrunk to half. The puzzled reader may rightfully ask, whether this phenomenon has been observed. The answer is no. Human beings may never attain such terrific speeds considering that a cannon ball flies only less than $\frac{1}{2}$ mile in 1 second. Now, the reader may grow indignant and ask: how do we really know that such shrinkage will be observed? The answer is: we deduct it from the Lorentz formula. But, the reader may say: perhaps the Lorentz formula does not work for such speed. It may well be, that empirical observation (that means practical observation) would bring different results in which case the formula would need alteration.

True enough, the differences in shrinkage, calculated from the Lorentz formula, if speeds are used attainable with human means, are so small, that human instruments would not be able to record it. On the other hand, Einstein has proved beyond doubt (by simple reasoning) that two observers in space, moving relatively to each other, would make different observations, would not be able to ascertain the simultaneity of an event, or the length of their measuring rods in absolute measurements.

Still you may rightfully doubt what we deduct from the Lorentz formula, namely: By relative observation (from a point assumed to be at rest) of a body which moves with great speed, it would seem that on the moving body, space has shrunk, time slowed down and the weight of bodies increased. And this latter fact has been actually observed.

As explained above, great differences would be observable, if we could attain such terrific speeds of 100,000 of miles per 1 second and more, coming near to the speed of light (abt. 186,300 miles per 1 second) And amazingly enough, such terrific speeds are attained today in every home, where there is a radio set.

From the glowing filament of a radio tube, electrons are released, which fly with great speed towards the anode plate. They have good reason to do so, because electrons are of negative electricity, and they are "attracted" by the positive charge of the anode plate. When we increase the positive charge to 10,000 volts or 1,000,000 volts

we increase the speed of the electrons to such numbers as 100,000 miles per second and more. Now the electrons have weight. They are heavy, as any particles is, and they react towards a magnet as any iron particles does.

You have seen a huge magnet working on a scrap iron yard. It makes a difference whether a piece of iron to be lifted is light or heavy. And on this principle we can measure the heaviness of electrons during their flight. We bring a magnet near to their path and measure the deviation, the deflection from their path, as exerted by the magnet on the "bodies" of the electrons. When we increase their speed to 100,000 miles per second and more, we, the observers at rest, find that the weight of the electrons increases, in accordance with the prediction of the Lorentz formula.

Of course, electrons in motion, mean electrodynamics, and the Lorentz formula has been devised for electrodynamics. It was Einstein, who applied the formula for moving bodies in general (see page 203). He took the formula and evolved from it another formula, which today is the basis of all the talks about atomic energy. As this is of common interest even to the man in the street, and as we are going to draw some analogy as to language in the coming chapter, we may dwell a little on the subject.

As boys and girls, we all learned in school a little formula, which in a very simplified form means: Energy depends on Mass and Speed. ($E = \frac{m \cdot v^2}{2}$; v=velocity, speed) This is a simple statement and can be easily explained. If a train at full speed goes on a wrong siding and crashes into standing freight cars there, the energy involved in this crash, will be great if the mass of the speeding engine and train is great, and if the speed of the engine is great. The greater the mass, the greater the energy, and also, the greater the speed of the mass, the greater the energy. This should be easy to understand.

Mass is something fundamental in our universe, some THING we can put on a scale and weigh. Energy too is fundamental in our universe. Any ACTION is a manifestation of energy. But what is speed? Can we reduce this notion to universal fundamentals? Yes we can. Speed is SPACE divided by TIME. This looks silly. How can we divide SPACE by TIME? It's an incomprehensible idea.

But it's actually simple. If an engine traverses a space of 500 miles in 5 hours, we find the speed of the engine by dividing 500 miles of SPACE by 5 hours of TIME. $500 : 5 = 100$. The speed of the engine is therefore 100 miles per hour. Simple isn't it?

We see now, that the little formula, mentioned above, which we learned in school, contains the four fundamentals of our universe

MASS	ENERGY	SPACE	TIME
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and we see now, that the grammar of semantography is equally based on those four fundamentals, two of which have been given names more common in every day speech

THING	ACTION	SPACE	TIME
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All these fundamentals contain the mathematical numbers, which - so we are assured by modern and ancient mathematicians - represent the language of the Creator and reveal divine truth, equally valid anywhere. Incidentally they are written in international symbols, equally valid in any language.

There is of course a fifth fundamental in semantography, and also in nature, the

HUMAN

element, which is the most miraculous one, because it represents a creation of Creation, fitted with a brain to explore Creation and reveal its secrets.

In some far fetched analogy we may think that in the modern theory of relativity the human element is represented by the observer, and in fact, this theory has opened our eyes and has led us to new ways of contemplating the universe and its fundamentals.

For a relativist, the two fundamentals SPACE and TIME have somehow merged into an indissoluble union. We have seen that the Lorentz formula robs SPACE and TIME of its absoluteness. There is no absolute length, no absolute time. The first man who was able to contemplate the new world in mathematical formulas was Minkowski, and the scientists have honoured him in calling it the "Minkowski World". It was he, who said in 1908 :

"The views of space and time which I wish to lay before you have sprung from the soil of experimental physics, and therein lies their strength. They are radical. Hence-

Henceforth space by itself, and time by itself, are doomed to fade away into mere shadows, and only a kind of union of the two will preserve an independent reality" (70)

It is very difficult for the non-mathematician to follow the reasoning of Minkowski. In the following lines an explanation is offered which should give the reader a faint idea of Minkowski's pioneer work.

In the chapter on page 144 The Relativity of Space, mention has been made of spaces with 4 or 5 dimensions. Our space is three dimensional. When we order a box from the carpenter we have to give him 3 dimensions, say 20 x 40 x 100 inch, indicating length, width and depth.

We cannot imagine a space with 4 or 5 dimensions. This means: we cannot form a picture in our mind of such a space. But the mathematician does not need a picture. He can imagine a space with 4 or 5 or 6 or n dimensions. It was Bernhard Riemann who, a century ago, set to the task, to evolve the geometrical rules of such spaces. He developed other formulae of strange surfaces and closed spaces, endless, yet limited. Take a cube. Each surface of a cube is a perfect square and if you travel on such a square surface, you would soon reach one of the four edges, where the surface comes to an end. But now imagine yourself travelling on the surface of a sphere. It has a well limited surface, and boys and girls learn in school how to compute the surface of a sphere. But if you travel on a very big sphere you would never reach an "end". And if you don't leave traces, if there are no landmarks of any kind, just a vast smooth surface of ice, for instance, you may go on and on in a straight line, until you come to the conclusion that your world is endless (although you may have arrived in your old tracks again). Riemann believed that our universe is equally limited but endless. It is curved like a lemon and all the phenomena, like light, electricity, gravitation, etc. are due to that curvature. Riemann believed that light too goes in curves, and he looked at a bright star, about to sink beyond the horizon, when a faint star just started to rise over the horizon on the opposite side. "May be", Riemann reasoned, "this is the same star, which light I see now coming from the other side."

When Einstein pondered about the phenomena of light, gravitation, etc. he remembered Riemann and when he opened his forgotten papers, he found there the formulas for spaces for 4 or 5 or n dimensions. And these formulae suited well his calculations.

Minkowski got the idea to evolve the formulae of a 4 dimensional space, in which time is the 4th dimension. Now this may seem incomprehensible, because a space dimension like length cannot be expressed in time, and time cannot be expressed by length.

But astronomers have done it for a long time. Being tired to express the distance of a star in "astronomical" figures with dozens of 000000000000, they have invented the space unit of a light year. This is the distance in space, which light traverses in a year's time. It is approximately 6,000,000,000,000 miles. Most stars are more than 100 light years away from us. Some are millions of light years away.

Minkowski went the other way round. He converted time dimension into space dimension by declaring: 1 second of time equals 186,300 miles in space, the distance which light travels in 1 second. His fourth dimension is expressed by c.t. In the case of t (time) be 1 second we have 186,300 x 1. Thus we have a fourth space dimension, which enters now the formula of 4 dimensional space. But the light constant c is in too.

Now, don't be afraid. The "Minkowski World" with imaginary time co-ordinate, resembles closely our own world. But if we take the two observers in space and the Lorentz formula, evolved according to Minkowski's formulae we get a very simple formula; ($x_1 \ x_2 \ x_3 \ x_4$ are the 4 dimensions.)

$$x_1^2 + x_2^2 + x_3^2 + x_4^2$$

One of these 4 space dimensions is the time dimension, but in the formula all 4 dimensions are treated alike. The great simplicity of this formula is revealed when we compare the two formulae for each of the two different observers moving in space. Both formulae look exactly like the one above, and are equivalent to each other. If these paragraphs have given you a faint idea of the work of Minkowski, the purpose has been fulfilled. In any case we have to believe the physicists and the mathematicians, and one of them, G.Y. Rainich, said:

"The really fundamental things have a way of appearing to be simple once they have been stated by a genius, who was in this case Minkowski" (71)

We may now have got a faint idea why modern scientists consider SPACE and TIME as two aspects of an indissoluble union.

Now, we should not be surprised that scientists today consider the two other fundamentals MASS and ENERGY as two different aspects of an indissoluble union.

Einstein took that little formula, which we learned in school: ENERGY depends on MASS and Speed (which is expressed by TIME and SPACE). He transformed and fused it with the Lorentz formula, then he cut off all small trimmings (just as we cut off a rest of less than a farthing from a sum) and out came a formula, which looks like simplicity itself

$$e = m \cdot c^2$$

It reads: ENERGY equals MASS, multiplied by the speed of light, power 2. If you compare it with our school formula on page 213, you will find the four fundamentals: ENERGY, MASS, SPACE and TIME. Yet the formula of Einstein differs fundamentally from our school formula. The symbol *c* stands for the speed of light (186,300 miles per second) and we know (see page 203) that this velocity is a universal constant, equally valid for any moving body, no matter what its speed.

But the fundamental difference lies in the following fact. Twenty years ago we learned in school, that MASS and ENERGY are two entirely different entities. They are related to each other, but we should never mix them up. Now, Einstein tells us, that MASS and ENERGY are two different aspects of the same "thing". Increase the energy of a mass and you increase its mass.

This means in every day language: If you throw a stone, you give that stone added energy from your arm muscles and consequently the stone becomes heavier. If you put a closed food tin on your stove and heat up the content, you add energy to that tin and it becomes heavier. This may seem incomprehensible or incredible at first sight.

Yet, the experiment described on the foregoing page proved that Einstein's formula works. If we add great energy by speeding up electrons in a radio tube, we can register the increase in weight of the electrons. With stones and food tins, the added energy is so small, that we cannot measure it, but with those little stones, the electrons, we can.

Modern atom physicists use that little formula extensively in their calculations and research. The mass of an electron can disappear completely in an atomic collision and is then transformed wholly into energy or vice versa.

In other words: Every piece of matter, a stone, a cut of cheese, any THING, is actually a chunk of ENERGY.

And if we try to calculate the latent energy, inherent in an ounce of cheese, or anything which weighs an ounce, we arrive at hair-raising results.

That little innocent looking part " c^2 ", the velocity of light (186,300 miles, multiplied by the same amount) gives the staggering figure of 900,000,000,000,000,000,000 cm/sec. Employing the scientific units of energy and mass we find that 1 ounce of cheese contains the energy, equal to about 650,000,000 kilowatt hours of energy, or the total electricity production of the United States (1939) during nearly 2 days. One ounce of cheese, please!

Now we may understand ^{how} radioactive matter gives off energy incessantly in radiation. Now we may understand why the sun radiates terrific amounts of energy incessantly into the cold spaces of the universe, without diminishing in observable size. It is the conversion of mass into enormous amounts of energy. Such conversion is supposed to have taken place in the atomic bombs.

Footnote: The hysterical reports in newspapers and magazines have created a wave of nervous disorders and breakdowns in hundreds of thousands of citizen, apart from the strain which is placed on all of us, who appear to have remained "normal". It may therefore be valuable to recall a report (as a healthy counter-balance to our fright) made by Major Alexander P. de Seversky, Author of "Victory through Air Power", etc., who was commissioned as Special Consultant to the U.S. Secretary of War and spent months of intensive studies of air damage in Europe and Japan, especially in Hiroshima and Nagasaki.

In his report (72) he refuted all the claims made about the atom bomb.

Radioactivity: He questioned the doctors and the nurses at the hospitals, the fire fighters and Red Cross workers who "had rushed to the scene in the first few minutes. They all denied personal knowledge of any lingering radioactivity" and no one of them could report having personally seen one case of radio burns or radio poisoning.

What then were those ugly scars we have seen in the cinema? Just ordinary fire burns. There was no atomic super heat, nor radio activity.

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Continuation of Footnote

Atomic super heat: Sevversky said: "It simply is not true that matter was vaporized in the intense heat...undamaged wood abounds everywhere...both atom-bombed areas have tree trunks and walls with growing vines to disprove the claims of super heat."

What then destroyed Hiroshima and Nagasaki? Was it the atomic blast?

Atomic blast:"The Nagasaki blast had virtually dissipated itself by the time it reached this area.Few houses collapsed and none caught fire. All of downtown Nagasaki, though chiefly wooden in construction,survived practically undamaged."The great destruction of Nagasaki had been mainly caused by the heavy ordinary bombing six days before.

In Hiroshima "there is little evidence of primary fire...kindled by the heat of the explosive itself." "Window glass was shattered,of course,but single panel frames hold firm." "The blast impact therefore could not have been unusual." However it was the blast which flattened a part of Hiroshima,partly due to the "incredible flimsiness of most Japanese structures...termite eaten and dry-rotted". In the collapsed houses "fires flared simultaneously in thousands of places,from short circuits,overturned stoves,kerosene lamps and broken gas mains.The victims...died as people die in any fire".

What would/have happened if the same bomb would have been dropped on any American city?:

Sevversky found that "the concrete buildings nearest to the center of explosion... showed no structural damage". "I saw buildings structurally intact,and what is more, topped by undamaged flag poles...and other comparatively fragile objects." "I questioned a great many people who were inside such buildings when the bomb exploded." He sums up his observations: "The more painstakingly I analyze my observations,indeed, the more convinced I am that the same bombs dropped on Pittsburgh or Detroit would have exacted no more toll in life than one big blockbuster,and the property damage might have been limited to broken window glass over a wide area."

So far the Special Consultant to the U.S.Secretary of War and this report should help millions of people to a better sleep and a calmer day.

Of course, sensationalists are not stopped by this and they are not tired to point out,that the two atom bombs dropped in the last war "are firecrackers compared with what will be developed in ten or 20 years". Others delight in telling the world that the atom bomb is already outdated,that new weapons are now prepared,much more powerful, much more terrible than the atom bomb.They have invented the idea of a war,of which the attacked country will be unaware for the first 5 years,until it is too late,with failures of crops,diseases of livestock,sterility in men and miscarriages in women, etc.etc.and all these beautiful phantasies are presented at a time,when the great majority of the people are trying desperately to make a bare living in a post-war-torn world.

Julian Huxley,Director General of UNESCO refers to the noble words of Attlee in the preamble of the constitution of UNESCO :"Since wars begin in the minds of men,it is in the minds of men that the defences of peace must be constructed." These words are directed to you and me and all of us,because every humble human being can help make and prevent war.In times like these,when we are told, that destruction will descend upon us suddenly and that the only defence is to attack first,it is up to you and me and everyone in the world to do his or her share to prevent war.We all of us have an opportunity almost every day to speak about this issue or any political issue leading to conflict.We talk in our home,in the streets,in the workshops and in the offices. If we use our senses,if we realize that political leaders who want to plunge the nation into another war,cannot do this if the nation oppose them determinedly,we can prevent war.The infection is spread by words.If we have learned to recognize dangerous words, we could readily counteract them. And this semantography system can help us to avoid the war of words.This in turn may stem the war of destruction by bombs and other weapons.More about this in the third book on "Semantics",especially in the chapters:The Ravages of Language,Germany a Nation ruined, Western Democracy and Soviet Democracy.etc. There we shall see how our 100 symbol elements can work for peace.

If we are able to avert the threat of a new world conflagration,there is great hope for a better future.Right now, the atomic piles already built, are working incessantly, giving off energy,helping medicine in many unprecedented ways and heralding a not too far off future in which atomic energy will take away the drudgery of life and will make the world a better place to live in.It is all up to us.The danger, is muddled thought provoked by muddled language.

(End of foot-note)

The foregoing explanations, based on Einstein's famous formula, has shown us, that MASS and ENERGY are two different aspects of the same "thing" and are convertible. This discovery is in line with other discovery which have puzzled the scientists before and is still puzzling today. We may call this phenomenon the dual aspect of matter.

Even after accustoming ourselves to the notion of ENERGY-MASS conversion, we still believe to know the difference between a THING (which means MASS) on the one hand and ACTION (which means ENERGY) on the other hand. Certain experiments however give puzzling results. We find that the matter in consideration turns out to be MASS; we find particles, little pieces of matter, also called corpuscles. But if we change the order of the experiment, we do not find particles. We find radiation, the emission of ENERGY.

Take for instance electricity. Famous experiments which have been repeated over and over again, have supported Rutherford's theory that electrons are little particles of definite size and weight, carrying a negative electricity charge. Electricity flowing in a wire is supposed to be loose electrons on the run. When they enter an evacuated glass tube they will leave the metal electrode and travel through the "empty" space of the tube. We can interfere by placing a grid in their path. This is how radio works. We can coat a part of the glass tube opposite the electrode with a fluorescent chemical and we can see how the little electrons hit the wall and cause tiny flickers all over. This is how television works. We can even arrange a loudspeaker and amplifier in such a way, that oncoming and hitting electrons will be heard, like the pattering of rain, or the sound of thousands of pea shots. Yes, these tiny electricity charges are corpuscles all right, and consequently: electricity is corpuscular in nature.

Yet, every radio set in our homes shows us that we have made another assumption: electricity is non-corpuscular. There we have the wave bands, distinctly marked in short waves, medium waves and long waves, and we learned it in school: electricity, light, heat, etc. are electro-magnetic waves. But waves of what? If we see waves on a lake, we know that these are waves of water. In the desert we see waves of sand. We can see waves of a veil. So what is actually waving and oscillating when electricity is transmitted? This is the great question.

If there are many experiments to support brilliantly the corpuscular theory, there are equally brilliant experiments to support the wave theory. In fact, the corpuscular theory was first and was abandoned in favour of the wave theory, because this theory could explain much better the many phenomena observed. But waves of WHAT?

This question troubled the first scientists who thought about the wave theory. They could observe nothing, no THING which oscillates, just like water oscillates. What they could observe was only ENERGY in ACTION. But something must do the waving, some medium, like water, oil, air, etc.

As they could find no medium, they assumed one. It must be there, otherwise our wave theory makes no sense. They called this invisible medium the Ether. In the course of time the Ether was attributed with extraordinary qualities, but still not one human being has been able to see it or even prove its existence. And so, up to the present day, our radios and other electrical apparatuses carry the number of the wavelength and consequently the frequency of the waves, although we don't know in what medium these waves are surging to and fro.

So you see we are confronted with two theories, the corpuscle and the wave theory and up to the present day scientists have not been able to decide in favour of the one or the other. Somewhat despairingly they have given in to a strange illogical assumption: well, electricity, light, etc. are both, waves and corpuscles. It's very unsatisfactory, such an explanation, we know it, but we can't help it.

It's a great mystery and we know today, that the mystery of the universe is ultimately connected with the mystery of what "is" light and electricity.

We don't know the "nature" of light and electricity, but we surely know the nature of a stone, a THING, chemical MATTER, some MASS we can put on a scale and weigh.

It came like a shock, when Rutherford declared that chemical MATTER "is" actually electricity in action, that atoms consist of electrons, little particles of negative charge which circle around a nucleus of positive charge. At once the old question "reared its ugly head": what is electricity? But as the whole idea referred to MATTER, it was assumed - and many experiments proved it - that the electrons are particles, corpuscles, matter. But what is pushing them around in their orbits?

At once the very uncomfortable thought was there again: corpuscles or waves? But apparently in the new conception of matter, the situation was aggravated, because in the atom we have corpuscles oscillating, we have corpuscles and waves, although the term waves is here used in a wider sense as an ENERGY manifestation, as an ACTION.

This idea throws our practical system of semantography into disorder, because we have used the term THING for chemical matter, and now we learn that a THING is actually a THING (electrons) in ACTION. But we shall soon see, that the disorder has spread. In fact, the whole lofty edifice of modern physics and chemistry is in disorder.

We all know what a table "is". A THING. We can see it, we can touch it, we can kick it; it is a THING all right. Now Eddington told us that - according to the new theory - a table "is" actually a mad dance of electrons. We accepted this, because we could form a clear picture of it. Electrons are little THINGS, and they are just mad at dancing.

Now, a new theory is accepted, if it can explain experimental phenomena better, which means "simpler" than the old theory. But not even twenty years passed, and many experimental data became known, which could not so easily be explained with the electron theory. New thoughts were born in the minds of new men. In the forefront are De Broglie, Schroedinger, Heisenberg and others. They call themselves wave-mechanics.

Eddington said: "A table is a mad dance of electrons." The wave-mechanics say: "No. A table is only a mad dance." A mad dance? Of what? What is dancing? If not electrons, what else?

But here the wave-mechanics are silent. They won't tell. The only thing they do, is to write down some formula, and if you try to form a picture of what the formula means, they discourage such efforts. Heisenberg said (see quotation at the beginning of next chapter) that our language is simply incapable to describe what is going on inside an atom. Yet, the new theory of wave mechanics is explained from the lecture platform in ordinary language, although inadequate and not satisfactory. The notion of the electron is upheld, but now, an electron is not a particle, not a corpuscle, not matter, it is a bundle of waves or as they say a wave packet. Waves, of what?, you may ask. But you don't get an answer. So somewhat disgusted you look into the lexicon. It is supposed to know about it. And there you find, for instance in Webster's New International Dictionary (28):

"The Schroedinger atom, an outcome of wave mechanics, is a nucleus of positive electricity embedded in and surrounded by concentric spherical shells of diffuse negative electricity, growing denser towards the center. Modern wave mechanics discourages the use of mechanical models and would go no further than a mathematical formulation in describing the atom, but the above is the mechanical approximation to which the equation leads. This newest atom accounts for the experimental facts more satisfactorily than any of its predecessors, and retains many of the mathematical features of the Bohr atom."

The lexicographer tried his best to give you a picture, showing you shells of diffuse electricity, and hoping you are not going to ask: "Electricity? What's that? Corpuscles or waves?" And Heisenberg can give you no better comfort as you see from the quotation at the beginning of next chapter.

So you see that modern scientists are today at a loss to give you a better explanation. And there are many other experiments, which mystified scientists so much, that some of them turned mystics. Eddington, in trying to explain the new theories, did well to put up a sign: Structural alterations in progress. (see quotation at the beginning of this chapter) and wanted to order the doorkeeper to keep out "prying philosophers." They will rejoice about the impass, which modern science has reached. They will grab at the result of experimental science, that matter is energy and energy is matter and they will unearth all the sayings of the philosophers of old, that 'matter is spirit' and 'spirit is matter', and they will readily use the arrival of science at the wave theory to tell us that 'the spirit pervades the universe'.

They have a strong case. Today more than hundred years have passed, since the dawn of the mechanistic era, when scientists believed that they can explain the whole universe "quite natural". Today we know that we have arrived at a point, where the "natural" defies all "quite natural" explanations, when we realize that a purposive force is at work in this universe of ours, which enraptures the greatest seekers of truth: the mathematicians.

The case of the "prying philosophers" is even stronger than we first expected. All the research on the nature of the atom were carried out with "simple" substances, hydrogen, helium, nitrogen, ^{etc.} Even the most complicated substance radium and uranium is still "simple" compared with the substances, containing an "agent" which has defied all explanations: LIFE, the ability of matter to create new matter with a mysterious "purpose"; to arrive at the creation of the human brain, the cells of which can ponder about this great design and purpose.

Schroedinger has written a booklet; What is Life? in which he uses the most modern theories of physics and chemistry to explain the marvellous workings of the chromosomes, which convey the characteristics of life to the next generation. He too reaches the point, where no further explanation can be given, and he makes this perfectly clear.

Today we know that Darwin's theories are only an infinitesimal link in knowledge. No one was more aware of it than Darwin himself, and we know that he was deeply religious.

The greatest fighter for Darwin was ~~Alison~~ ^{Thomas} Huxley, and his grandson, Julian Huxley, still one of the foremost defenders of evolution, Director General of UNESCO demands in his Program of UNESCO, "the study of unusual and at the moment, scientifically inexplicable properties of the mind, such as extrasensory perception of various kinds. The painstaking researches of one or two recent workers in this unpopular field seem to have established the reality of some degree not only of extra-sensory knowledge, but of pre-cognition. It is urgent that these phenomena should be thoroughly investigated so that a new and more comprehensive scientific framework of knowledge may be erected." Huxley refers directly to Hindu yogis and other mystics.

Einstein feels himself enwrapped in a kind of "cosmic religion". He refers to the feeling we have, when looking up to the great firmament filled with myriads of stars. We too, are "particles" in this "great design". We too follow the harmony of the stars. We too feel the urge to create order out of disorder.

The tympanum of New York's Riverside church shows the figure of Christ, surrounded by the four evangelists; in rings in the doorway arch appear Moses, Confucius, Buddha and Mohamed. Other figures include Hippocrates, Euclid, Darwin, Pythagoras, Socrates, Plato, Spinoza and Einstein. The pastor of the church Dr. Harry Emerson Fosdick, the well known writer on religious subjects, feels that they all fit in the place. They all can help to give us that new faith we need, in line with the most modern science.

It may be fitting to end this chapter with the saying of the physiologist Du Bois Reymond: "Ignoramus. Ignorabimus". - "We don't know. We shall not know."

ENERGY - MASS. THE DUAL ASPECT IN LANGUAGE.

"It is not surprising that our language should be incapable of describing the processes occurring within the atoms, for, as has been remarked, it was invented to describe the experiences of daily life, and these consist only of processes involving exceedingly large numbers of atoms. Furthermore, it is very difficult to modify our language so that it will be able to describe these atomic processes, for words can only describe things of which we can form mental pictures, and this ability, too, is a result of daily experience.

...for visualization, however, we must content ourselves with two incomplete analogies - the wave picture and the corpuscular picture."

W. Heisenberg (69)

The foregoing rather long chapter may not find the approval of many readers. Many may find it not necessary. The author however, thought, that he must deal with this "matter" sooner or later. He has shouldered the task to find a more appropriate grammar, equally valid for different languages. One outstanding feature of this new grammar of semantography is the abandonment of the "noun" and the introduction of natural science by the notions of the chemical THING and the physical ACTION, both manifestations of either MASS or ENERGY.

The division into chemical THING and physical ACTION, following the popular division into Chemistry and Physics, could have been justified say 50 years ago. And although school curriculae still hold on to this division, it has been long since abandoned. A new branch has been created: Chemo-Physics or Physico-Chemistry, but no actual frontiers have been drawn and we have learned from the foregoing chapter that all frontiers have vanished and that a THING may be recognized as a manifestation of ACTION and vice versa.

Scientists could have therefore objected to the grammar of semantography as being obsolete in the division into chemical THING and physical ACTION. The author thought it therefore necessary to explain the latest development of scientific research and to show that the division into THING and ACTION

- (1) is in line with modern research, which admits both versions, even in atom theory.
- (2) is a very practical division for the experiences of our daily life, in which THINGS perform ACTIONS.

It remains now to show, that the dual aspect: corpuscle or wave - MASS or ENERGY - THING or ACTION is to be found in the words of our every day speech.

There are many words in all languages which have that dual aspect. They stand for THING and ACTION. And strangely enough - in most cases - it is the UNIT of ACTION word which is used for the conversion.

On page 211 we have learned that the UNIT of ACTION word writ, once used for the Holy Writ, is now in disrepute and stands today for a warrant of arrest. For every-day speech the infinitive is used: writing. If we now write down the sentence

His writing is beautiful

what does the word writing mean. It may stand for the ACTION. It may stand for the THING. But the ambiguity goes even further. He may be a good writer, but he may also be a good calligraphist. Furthermore, it may well mean that the way he swings his wrist and hand when writing may be beautiful to look at. This is very much the case with Chinese writers. You don't need to look at the characters they write down. The way they write is of infinite grace. But the characters they write, may sometimes be not beautiful.

Finally, the writer may write very awkward lines. His manuscript, the writing, may be a heap of dirty pages, not beautiful at all, but what he has written, may be considered beautiful by the generations to come.

We see, there is great ambiguity in such a word, and Ogden and Richards, the "standard semanticists" have listed the ambiguous use of such words as the utraquist subterfuge:

"The third subterfuge, the utraquistic, has probably made more bad argument plausible than any other controversial device, which can be practiced upon trustful humanity." (see full quotation on page 191). The word utraquista is Latin and it means both.

Conventional grammar and ordinary language gives us no training to recognize the dual aspect of such words. But semantography may help in this direction.

In the following paragraphs simple words have been chosen to lead the learner into this special field.

Take the word building. It refers usually to architectural structure. But it is actually the infinitive of to build. As it stands it has the dual aspect of THING or ACTION. We may even use the analogy of atom physics, in which energy is transformed into mass and vice versa. The ACTION of building when spent, has been transformed into the MASS the building.

But as said before, not the infinitive ACTION word is used for that conversion, but the UNIT of ACTION word, very often having the ending -ion, -ment, etc.

Take the ACTION word to select, selecting. The UNIT of ACTION word is select-ion. Again, the word has the dual aspect, THING or ACTION.

- The selection was made yesterday. selection means the ACTION.
- The selection was put in the window. selection means the THING
- What an astounding selection! selection means both.

A similar word is the UNIT of ACTION word arrange-ment. Take the two sentences The arrangement was made today. It is beautiful. In the first sentence the word refers to the ACTION, But in the second sentence, the word It does not refer to the ACTION, It refers to a THING. Combine the two sentences and you get: The beautiful arrangement was made today. Now arrangement stands for both, THING and ACTION.

The UNIT of ACTION word advertise-ment works similarly. It refers to the ACTION to advertise, advertising. However, it refers also to the THING, the paper which bears the printed words, and which you can cut out from a newspaper.

As a joke, we can observe the transformation of ENERGY into MASS and vice versa, in the following sentences.

The advertisers decided to advertise their products, in other words to make advertise-ments. They inserted these advertisements in the daily papers. There they appeared in full page. Besides leaflets were printed in 3 colours. These advertisements were very beautiful. For all these advertisements the advertisers used up a huge MASS of material. They decided that the ACTION of the advertisements should last 3 months. After that time the MASS of advertisements, the newspapers and leaflets have disappeared in the dustbin. The MASS disappeared, the ENERGY put into that MASS worked now in the people's mind. The advertisements, although not more existing, continued the ACTION of advertising and people came to buy the goods long after the advertisements have ceased to exist.

Take the above paragraph as a joke. But it may help you recognize ambiguous words.

The above 3 examples select-ion, arrange-ment, advertise-ment are UNIT of ACTION words which have a special ending. But very many words in English of such kind have no ending.

Take the words account and design. They have that dual aspect. They mean THING & ACTION.

The word sight refers too to the ACTION of seeing, as well as to the THING seen. Besides it refers also to our eyes.

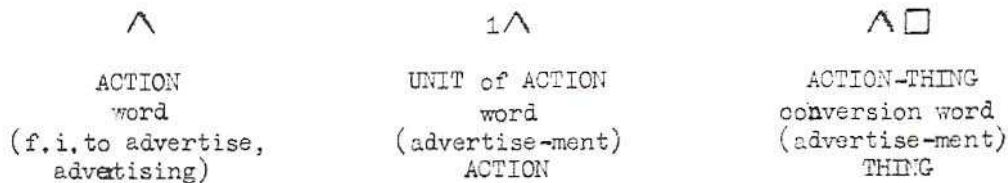
A cut can be made in a fraction of a second. It may then take the cut months to heal. A cut of beef will not last long. A cut of stone may remain for ages. (see p.193)

A driver drives his car in one drive or in many drives over a plain. After such ACTIONS that track takes on the name of drive. It's a THING now.

Making promenades along a river bank will soon convert that strip of land into a promenade.

Other words are mixture, addition, cover, fold, form, etc., etc. In fact, there are thousands of words in many, if not in all languages which display that double aspect of standing for the THING and the ACTION.

We have discussed the treatment of such words in semantography already on page 192ff. It is very simple. But again, we may stress the fact, that it is not necessary in semantography to point out the UNIT of ACTION word, or any verbal noun. But it can be done.



And for the critical grammar-minded readers who insist on the inflated verbal noun: but we are not going to use it in semantography)



Let us now compose the symbol for advertising



We don't need the UNIT of ACTION word, and we don't need the double indicator $\wedge\square$. The compound symbol shows a material paper leaf. For the THING no indicator is necessary.

THE SECRET OF SECRETS OF BASIC ENGLISH

"There are no verbs in Basic English"

C.K.Ogden (73)

The foregoing chapter deals with words which show that dual aspect: they stand for the ACTION and/or the THING. It may be convenient to have this chapter inserted here, because it is directly connected with the foregoing chapter.

The necessity of a world auxiliary language has been realized by most people. Why nothing came out of all the efforts may be partially explained by, what we called, the "irresistible force of the mothertongue". Even if Esperanto or any other constructed auxiliary would be taught in all schools, it would be a failure with most pupils, just as all the foreign language learning has been a failure. Besides there is no force to learn Esperanto in order to make a living.

When the idea of Basic English was published for the first time, about 25 years ago, it was considered as something approaching a marvel. Here are only 850 words, which could be quickly memorized and they enable the student to speak an English, understandable to an Englishman and besides, all around the world, because English is already a world auxiliary language to some extent.

But the marvel was even greater. Basic English contained an innovation, unheard of in any language and in any constructed language. There are no verbs in Basic English.

How is this possible? If this claim holds true, then all the fussing with the ACTION word in semantography may be obsolete. Ogden is further ahead, people may say. He has already eliminated the verb.

Well, has Ogden eliminated the verb? No! He has not. What then is the secret of Basic English? What enables Ogden to uphold his claim: there are no verbs in Basic English. The secret is the use of the verbal noun, the MASS-ENERGY word, the word which can do both works; it can stand for an ACTION and/or for a THING.

Before we go further, I wish to make the following clear:

I am greatly indebted to C.K.Ogden and his pioneering work. Without this, I would have never attempted semantography. It was Ogden who proved to the world that word economy is possible.

Furthermore, it is my belief, that Basic English is the greatest step made towards a word auxiliary. I even believe that semantography could be of help to bring a spoken auxiliary about: people using the word order of semantography and using English words instead of the symbols.

But criticism is necessary - a constructive criticism, of course, because something seems to be wrong with Basic English. There is the strange fact, that the greatest opposition against Basic English comes from the British people themselves. Some of them, even discourage foreigners to learn Basic.

English people declare that they are unable to speak Basic English. Why?

Ogden, when he set out to find the words which are most versatile, was apparently much taken with the ENERGY-MASS words, because they could do double work. Nouns, like advertisement, selection, invention, could be used for the ACTION and/or the THING. But some helping verb is necessary. I make an advertisement refers to the ACTION. I see an advertisement refers to the THING. So he selected 18 helping verbs, namely: be, have, make, do, come, go, give, take, get, put, keep, let, see, seem, send, say, may, will. He stripped them of the term verb and called them operators. With them those nouns could be operated. The verb to advertise, to select, to invent is abandoned and so are all the other verbs. You are not allowed to say I advertise, and you can't say I advertisement or I selection.

But fortunately there are many ACTION-THING nouns in English which have shed any ending, like -ment, -ion, as for instance end, whistle. We are allowed to say I make an end (ACTION) or I see an end (ACTION or THING). But we are not allowed to say I end. The word whistle is even more versatile. I have a whistle, means a THING. I give a whistle means an ACTION. I hear a whistle may mean the whistle itself or the sound, air molecules in action. But we are not allowed to say I hear a whistle; "hear" is not an operator (one

of the 18 verbs mentioned above, which Ogden termed operators). We are not allowed to say I whistle, I hammer, I water, I walk, I question, I grip, I attack, I act, I move. Why? Because all these words whistle, hammer, water, walk, question, etc. etc are only nouns and must be handled as such. They cannot stand for the verb, because there are no verbs in Basic English. Even act and move are nouns only, not verbs.

When we look closely for similar "nouns" like act, move, etc. we find to our astonishment over 200 words or more than one quarter of the whole list, which are "pure" ACTION words, as for instance shake, smile, smash, sneeze etc. And again we are not allowed to say I shake, I smile, I smash, I sneeze, because there are no verbs in Basic English. Instead we must say I make a shake, I give a smile, etc. etc.

This exasperates English people. They refuse to accept Basic English. There is the noun "knowledge" in the list. You must say I have knowledge but not I know.

However there are about 300 words in the list to which you are allowed to add the ending -ing. Thus you can turn the nouns into something else: whistling, hammering, working, etc. You are not allowed to say I work, but you may say I am working. But don't think that working, or hammering is a verb form. It is an adjective, a quality word, according to the grammar of Basic English. The man is beautiful. The man is hammering; both sentences indicate a quality. No verbs.

So you learn to your amazement that the Basic list contains 600 nouns, 150 adjectives 100 operators, directives etc. but no verbs. From the standpoint of the grammarian there are no verbs in Basic English. From the standpoint of the physicist almost every word of the Basic list bristles with ACTION.

We may now understand why English people declare that they are unable to restrict their speech to the round-about way forced upon them by the claim; there are no verbs in Basic English. It may become clear, that Ogden was so much taken with this idea, that he overlooked the difficulties arising from this claim.

The remedy may be plain. The abandonment of the claim forbidding the use of verbs and the abandonment of conventional grammar which governs the formulation of sentences without the verb form. Let us be allowed to say I hammer, I whistle, I act, I move and let us learn other words as divided by their ending advertise-ment, select-ion, know-ledge. Then we should be allowed to say I advertise, I select, I know, etc.

If Ogden would agree to these reforms than the curse would be removed from Basic English, a curse placed by English speaking people.

All this becomes clear, once we abandon the notion of the "noun" and "verb" (in the restricted sense); in other words: when we apply the grammar of semantography, operating with the chemical THING and physical ACTION.

As said before, semantography and Basic English could mutually support each other and for this reason this constructive criticism is offered.

A F E W W O R D S T O T H E C H A P T E R S
P H Y S I C S I N L A N G U A G E

Every reader who thinks that these chapters are completely out of place in this book may probably change his mind, after studying the standard work on General Semantics SCIENCE AND SANITY by Alfred Korzybski (56).

Korzybski now teaching in the United States has been a practical engineer and is addicted to mathematics and all the natural sciences, including physiology and psychology. His contribution to the science of semantics is great and we shall hear more about it in the third book. A great part of his book is devoted to mathematics and physics and to the structure of our language, which today has not yet been adjusted to mathematics and physics; hence our maladjustment in thinking and talking.

Unfortunately Korzybski's book is written as a text book for teachers and scientists. It can be understood only by a reader who has mastered all the modern mathematics and physics. Readers without university training may not gain very much.

As far as I am concerned, I would have never dared to bring those chapters into a book on symbol writing, until - I read Science and Sanity. I can only wholeheartedly agree with the application of mathematics, physics and chemistry to our thinking and talking, because somehow, consciously and subconsciously, I did it all my life. My father was a mechanic and already as a baby I crawled around in father's workshop and learned to think in terms of natural science. I realized that the human body works like a miraculous machine and has to be fed, oiled and kept in good shape. But I realized too, that a glorious sunrise watched in the solitude of the mountains is the proper fuel to the mind, just as a good meal is the fuel to the body. I applied natural sciences to the science of happy living, which basically means thinking, because happiness is a reaction of our mind.

Starting semantography in 1942 I have applied chemistry and physics to our language. I went a quite different path than Korzybski, but basically we want to reach the same goal: sanity in speech and thought. I learned of Korzybski's work only in 1946.

Korzybski's General Semantics is now fully recognized in the States and elsewhere. Among the writers and lecturers are professors and researchers from the universities of Chicago, Iowa, Wisconsin, Northwestern University and others as well as colleges in the States and abroad.

I hope to have their approval or at least their sympathetic understanding. On the other hand I am prepared for ridicule and abuse from other quarters. But still I have the hope that those other quarters, although scorning my venture into the natural sciences, will perhaps recognize the practicability of semantography - for practical purposes.

We shall now return to the foremost aim of semantography - practical symbols for practical people, who don't need to be bothered - and should not be bothered with the foregoing chapters on science.

THE WHEEL AND THE RAILWAY

"Trade no longer moves in galleons. Man is more mobile than in Viking days, but Babel's curse is still upon us."

Walter D. Head (44)

Many of the following symbols could be used for display in railway stations, airports, harbours, etc., as well as on anything concerning communication. Follow the development of the symbols line by line, as very often, the compound symbol is based on the foregoing symbols. Studying the symbols in this way, will make them almost self-explanatory.

⊗	^ ⊗	—	⊗
wheel	to wheel, wheeling	earth	move, movement, motion
^ ⊗	v ⊗	x ⊗	x x ⊗
to move (verb)	mobile (adjective)	quick (much motion)	express (for trains)
x ⊗!	x ⊗!!	↓	↓ x ⊗
short quick move (exclamatory!)	jerk!!	opposite meaning	slow

In such compound symbols we may even omit the earth line.

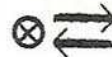
We may omit the earth line in the following compound symbols:



push



pull



to and fro move



shake



THING



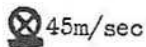
to carry, transport



to send (off)



to bring, fetch



motion equal to
100 miles per hour



speed, velocity
(motion divided by time)



zero motion
standstill, rest



motion of
electricity



travel, journey



traveller



car



train, (many cars)



railway



railway station



table, platform



train platform

We shall now devise the symbol for machine. We shall use the wheel and a larger circle which may indicate the sun, as the first energy factor on our earth. But the symbol has also the outline of an excenter wheel, such as we can observe on many machines.



machine



electrical machine



engine



flying machine

For convenience sake, we may invent a few auxiliary symbols which should depict in fewer lines a steam engine, an electric car, an automobile driven by combustion, etc. The advantage of such auxiliary symbols is that we may omit the symbol for machine, furthermore the outline is shown, which is almost self-explanatory.



vehicle driven by
steam (water up)

or
simply



steam engine
(showing funnel)



vehicle driven
by electricity

or
simply



electric engine
(tram in cities)



vehicle driven by
combustion (fire)

or
simply



motorcar
(showing volant)



airplane



jet-plane
(out symbol)



bed



sleeping car



food(mouth,earth)



dining car

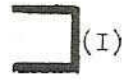
The picture of a bed to stand for sleeping car has been used by the Wagon Lits Comp. in timetables for many decades. Dining car has been depicted by two crossed forks. This would be difficult on our typewriter. The symbol for food is much simpler.



seat



compartment



1st class compartment



IIIrd class car

box, suit-case
of any kind

big small

box, big, trunk
we may also minimize the symbol

hand-case, bag



luggage, baggage



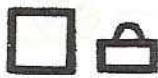
baggage car



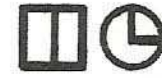
letter, mail



mail car

cloak room
enclosure for lg.piece of paper,
leaf, etc.

ticket

time-book
time table

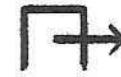
start, departure



arrival, stop



entrance













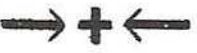


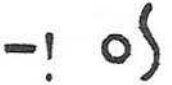










exit

information
(open f. question)

before after

late, belated
(after time)through
non - stoplimits
boundariesstate, country
(flag on earth)frontier, bound-
aries of statepassport
(state-travel-book)customs
(toll bar)money
(rod of Mercurius)duty, toll
customs paymenttransit visa
(paper-through-state)

	LONDON				DOVER		LEEDS
train for LONDON		stairs		alight for DOVER		change for LEEDS	
	one		only, single		sun		over earth: day
	Saturday, only		Monday to Friday		holiday (happy)		Sunday and Holiday
	go and return (on ticket)		smoking (mouth & fire)		no! (negative)		no smoking
	window		out		no (leaning) out of window!		no spitting! (mouth-water-down)
	turn (signs on car radiators)		heat		safety warning! (see page 358)		crossing

These three pages of traffic symbols for cars, stations, time tables, etc., etc. should suffice to convince us, that we would not have any difficulty to express in simple symbols anything which we want to convey to the traveller of any nation. If state railway officials of many countries, (or only of the most important ones), would decide to display these signs, with the words in the native language underneath, the public would have no difficulty to grasp the meaning. Look at time tables of today. They are already full of symbols. What is necessary is only a little international co-operation!

THE PEN AND THE BOOK





"International arbitrary signs and symbols in punctuation:

, . ; : - ? ! () [] _ ' ^ ~ ~ " / { } & @ % + etc.












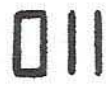




















Webster's New International Dictionary (28)

The symbols on the following page are composed with basic symbols, two of which are new and discussed in detail in a later chapter. Most important basic symbols in this group is the pen, which stands for anything written, furthermore the paper leaf and its repetition in the symbol for book which stands for anything printed. Some symbols are repeated from former chapters to show the development of the new symbols.

BASIC SYMBOLS FOR READING, WRITING, SPEAKING AND PRINTING

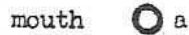
			
pen, pencil any writing utensil	to pen, write to use a pen	book	to use a book to read, study

But we can use another symbol to depict reading, the eye and the page.

			
eye	page	reading	reader
			
liquid (prototype water)	ink (pointer at liquid)	ink pen (pointer at pen)	fountain pen (pen containing ink)
			
Drawing one line and another	to repeat, copy, duplicate <u>anything</u>	the copied <u>THING</u> copy, reproduction	<u>printed copy</u> reproduction
			
machine (see p.225)	typewriter (machine-pen)	machine for dupli- cating <u>anything</u>	printing machine (duplicating pages)
			
eye ear	news	newspaper	newspaperman
			
to speak, tell (mouth)	speaker storyteller	speech, story for printing	printed speech, story, report
			
part (line divided) (see p. 119)	chapter (part of book)	paragraph (part of page)	book cover (roof symbol)
			
line (on page)	letter (part of line)	language (mouth & ear)	word (part of lang.)



sentence
(many words)



vowel
(repres. by a)



consonant
(repres. by b)



syllable
(repres. by ab)

We shall now anticipate two new basic symbols, the vessel, (represented by the outline of a bowl) and explained in detail in the chapter Private Property in the Animal Kingdom, and furthermore the basic symbol for money (represented by a schematic rod of Mercurius, the God of Merchants This symbol we can see in display on many banks, commercial buildings, banknotes, etc. of many countries). The combination of vessel and money gives us the symbol for trade, business, etc.; see the coming chapter Money and Business.



vessel, hold
(outline of bowl,
see next chapter)



to give out
(arrow out of bowl)



money
(rod of Mercurius)



trade, business
(money & hold)



a book writer
(man-pen-book)



a book printer
(man-duplicating-book)



a book publisher
(man-giving out-book)



a book seller
(man-trading-book)

It may be appropriate to end this chapter with the construction of a symbol which should stand for "semantography". It should be a new writing in our small world, designed to serve all nations. We may therefore construct our symbol with the basic symbols for world and writing.



earth



sky



world



writing

Note: In later years I preferred a better symbol for semantography. I chose the symbol for our planet earth, shown on page 243, where (continued at right)



world-writing
semantography

where the inclined earth axis is the same oblique line, indicating the pen and writing. This symbol shows then our own world of ideas revolving around writing and printing.

Incidentally, the symbol looks like the converted last letter Z of the phonetic alphabet. Allegorically, it may stand for the first letter of a new "alphabet", a "converted" one, to embrace all languages.

A L L O R N O T H I N G

"That wretched monosyllable "all" has caused mathematicians more trouble than all the rest of the dictionary."

E.T. Bell (74)

"We start with a little semantic experiment upon the subject of "allness". We take any actual object, an apple, a pencil, or anything else which is familiar to the children. The principles involved are entirely general and apply to all objective levels

THE SEMANTICS OF THE MEANING OF "ALL AND EVERYTHING"

in a very similar way. We tell them that we will have some fun. Then we ask them to tell us "everything" or "all" about the object in question; in this case, the apple. When the children begin to tell us "all" about it, we write the characteristics down on the blackboard. This last is vital. We must have a visual and extensional record of the ascribed characteristics. When the children have exhausted their ingenuity in telling "all" about the apple, we should not be satisfied. We should make them doubt, urging them that, perhaps they did not tell "all" about it, using the word "all" continually. The term "all" should be stressed and repeated to the point of the children's being thoroughly annoyed with the term. The more they learn to dislike this term, the better. We are already training a most important semantic reaction.

Alfred Korzybski (56)

From the above quotation we realize that we need a semantic symbol to express the word "all" of our daily speech.



But even this symbol is too wide in meaning and should only be used in scientific sentences, like "all human beings", etc. For the "small talk" of our daily speech we need an even more restricted and sharply enclosed meaning for the word "all".



Needless to say, that the word "all" falls into the group of human EVALUATION words. Most people who use this word to put over an argument to you, may even know that they lie deliberately. "All citizen in this town resent this measure..." , "We all are of the opinion..." , "All the world..." etc. etc.

The symbol warns us, that anyone using the word "all" can only refer to some multitude and to a very restricted one.

NUMBERS IN OUR DAILY SPEECH

"In the evolution of mathematics, we find that the notions of "greater", "equal", and "less" precede the notion of numbers. Comparison is the simplest form of evaluation; the first being a search for relations; the second, a discovery of exact relations. This process of search for relations and structure is inherent and natural in man, and has led... to the discovery of numbers."

Alfred Korzybski (56)

Numbers are already written in international symbols; so are the symbols for the mathematical operations, (addition, multiplication, etc). The following symbols are therefore almost self-explanatory.



1	1x	☒	1☒
opposite meaning	few	all	none, nothing
0	1	1☒	∨ 1
none, zero	one	each, every (of all)	singly, only

We can add the little multiplication mark in such meanings. In the following symbols we shall use the numbers of the ordinary typewriter, in which these lines are written.

1X	2X	3X	X,XX
one times, single	twice, double	thrice, triple	many, very many times

⌚	⌚ ₁ X	⌚ ₂ X	⌚☒
time	once, one times	twice, two times	always, all times

⌚ _{XX}	1	⌚1 _{XX}	1 _{XX}
very many times	opposite meaning	seldom, rare in time	rare, very few in numbers






□	□ ₂	□ ₁₂	□ ₁₄₄
THING indicator	pair	dozen	gross
^	^ ₂	^ ₃	^ _X
ACTION indicator	to double	to treble	to multiply
1	□	^	∨
one mathematics	1	1	1
	one THING unit, sample, example	to single out, to sample, make, become single	single, only singular


Human EVALUATION loses its vagueness, once it enters into the meaning of exact numbers. Yet, what is a singular event, who is the only man who can do something, who is the first man in literature, etc., etc. in all these sentences the underlined words refer to human EVALUATION words.

1 人	2 人	3 人	X 人
solo man	duo	trio	group

THE BASIC SYMBOL FOR HOLD, CONTAIN, POSSESSION

The dot after a number can be employed to indicate the ordinal numbers first, second, third, etc. This method is employed in some languages, for instance in German.

1.	2.	3.	
first	second	third	last (opposite)
50.	1/100	‰	‰
fiftieth	one hundredth	per cent	per mille
			
1.	1.	1.	1.
first THING	to make or become first	firstly, first	first man (president, etc)

In using the big EVALUATION symbol for the inflated adjectival noun  we can form the meaning of oneness, singleness, uniqueness, singularity, entity, etc. etc.

These examples may prove that we can use the numeral symbols to indicate particular meanings referring to numbers.

PRIVATE PROPERTY IN THE ANIMAL KINGDOM

"Broken cisterns that can hold no water."

Jer. II. 13

"We mean to hold what anciently we claim."

Milton (28)

Any creature which "eats" is equipped with an organ for taking in and holding the food. This organ is commonly called the mouth. Once a creature seizes a piece of food, and encloses it within its jaws, the food becomes the private property of this creature and this "natural law" is respected by the other fellows of the species. This "natural law" is also respected in communities of human beings, which have abolished "private property"! With many animal and insect species, the creature may give up the food - out of his mouth - for his mate or their offsprings, or even for the common benefit of the whole community, as the bees do, but it may also swallow and digest the acquired property. The hamster, a ratlike rodent, is even equipped with large pouches between its jaws, which holds the food acquired until needed.

Millions of years before primitive man learned the art of making pottery, the outline of the lower jaw, indicated already the form of the most primitive vessel, a hold.

We have used the upper outline of our skull to indicate the brain. We may now use the lower outline, in a schematized form, to indicate a vessel, a bowl, a hold. As to the ACTION word, we may refer to the working of our tools: a hammer hammers. A hold holds.



hold, bowl, vessel, receptacle, recipient, container, receiver, pocket, hamper, pouch, sack, cradle, keeper, retainer, store, etc. etc.



to hold, to keep, to retain, to contain, to store, to stock, to hoard, to reserve, to conserve etc. etc.

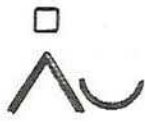


THING, held in the hold, contents, load, hoard, lading, cargo, freight, filling, collection, accumulation, store, treasure, etc. etc.

We have no difficulty to symbolize the verbal noun, the ENERGY-MASS conversion noun, also the adjective, and the adjectival noun



The Holding
ACTION noun



The Holdings
ACTION-MASS noun.



capacious
EVALUATION



The Capacity
EVALUATION noun

Now some readers may object. The hammer hammers means some real physical ACTION. But surely no ACTION is involved in the sentence The hold holds.

However, the physicist can easily prove that a real ACTION is involved. He can measure the strain which a human being has to exert in holding something. But he can also measure the strain exerted on inanimated things. The molecules of a vessel, a bowl, a hold may do some very strong ACTION to counteract the stress and tension exerted on them by the gravitational pull of the load. We may even hear a bowl, a bag, a bridge groan under their ACTION to hold a load. Bridge engineers may tell us, that steel bridges have to be replaced after 50 years or so, because the molecules got "tired" and "fatigued" and have reached a point where they can hold no longer. The word "tired" is the actual engineering term.

We may then concede that the verb to hold refers to a real physical ACTION. Of course, we may use it also in a metaphorical way, in which case, we should display the symbol for metaphor (to be shown later).

If we put something into a hold, or take something out of a hold, or exchange something in and out of a hold we perform a visible ACTION and we may use the arrow to indicate this ACTION. When displaying the arrow we usually do not need to display the ACTION indicator.



to get, to take, to take in, to receive, to pick up, to obtain, to accept, to absorb, to acquire, to accumulate, to pocket, etc. etc.



to give, to give out, to give away, to present, to offer, to contribute, to release, to let go, to donate, to award, to dispense, etc. etc.



to change, to exchange, to interchange, to give and take, to substitute, to convert, to barter, to swap, to reciprocate, etc. etc.

There are many more synonyms in the English language and in all the other languages some polite, some rude, some business-like, and they can all be adequately represented by the above simple symbols. They refer to one of the oldest activities of the human race to take and give and we can even visualize the primeval dealings of primitive man in these symbols, which indicate a primeval vessel and a primeval weapon.

Adjectives can be formed accordingly.

Thousands of other words can be formed by adding another symbol, for instance



limits



time-limit



to borrow, hire, rent, take a loan, take a lease, etc.



to lend, let, hire, loan, lease, etc. etc.



brain
(brain outline)



thought
thinking




minus thought
thoughtless



to give thoughtlessly
to squander, dissipate,
waste, lavish, etc. etc.

TO GIVE AND TAKE THOUGHTLESSLY AND UNLAWFULLY

			
scales balance	to judge (mind & balance)	law (to judge & book)	to take, not lawful to steal, rob, pilfer, loot, sack, plunder, pillage, ran- sack, burgle, defraud, cheat, swindle, fleece, etc. etc.





However, the two compound symbols for thoughtless giving and unlawful taking carry both the mind  symbol, and that means that the words are relative in meaning, and that the meaning may differ in different minds. What somebody may consider thoughtful giving, someone else may consider thoughtless giving, squandering, wasting, dissipating.

The symbols for lawful and unlawful show too, the system of reference, the human mind. What is lawful in America, may be unlawful in Soviet Russia and vice versa. Many laws of Nazi Germany have appalled people in the whole world. Yet in the minds of Nazis it was just the other way round.

And so we have arrived from the primitive pottery of primitive man to the complexities of our present day world, which include the complexities and perplexities of our law books. We should then feel the necessity to find a proper symbol for private property.





To show the differences between the meaning of holding, taking, giving and possessing let us choose a very common situation, where "jungle law" still prevails: the friendly lending of books to friendly people. In very many cases, the books are not returned. An English writer once suggested the day of books. One Sunday in the year should be chosen during which every man, woman, boy and girl, should go through all the books on their bookshelves and return the books which do not belong to them. However, a colossal traffic congestion is to be expected, as whole nations will be on the move.

Our symbol for hold, container, shows a bowl. We could, of course put some books in a bowl. But we have more suitable containers for books, and we can find an auxiliary symbol.







basic symbol	basic symbol	basic compound symbol	auxiliary symbol
			
hold	book	holder of books	shelf

We could dispense with the auxiliary symbol and - using only basic symbols - depict: a holder of books, having horizontal wooden boards.

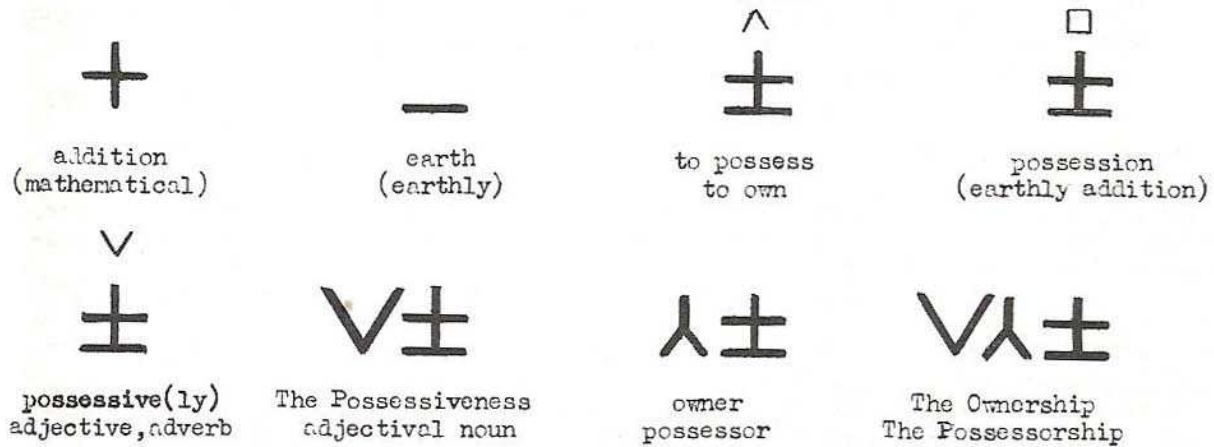
We can now form the simple sentence Man holds book. However, if we mean the word holds in the restricted sense: holding in the palm of his hand, we should add the symbol for hand.

			
hand (outline 2 fingers)	to touch (with hand)	to hold, to grip (with hand)	to hold (in general)

We may form now the sentence unit:

		
man	holds keeps	book
		
man	holds grips	book

Let us now form our symbol for private property, private ownership. Let us bear in mind that "to own something" means in every day language, an addition, a gain, a plus, but not of some spiritual thing, on the contrary, of some very earthly (material) thing. We shall therefore use our basic symbol for addition, and for earth in combination:



Any objections?

- (1) To own, to possess are verbs, but they do not indicate any physical ACTION. Well, ask the owner of a house, a field, a horse, a cow, a dog, a canary, a pair of trousers, a shirt, a shirt stud, anything. They will tell you that there is plenty of ACTION involved in that ownership.
- (2) The symbol for possession, etc. looks like a tomb stone. Indeed it does. But this is purely incidental. But, as the symbol seems well chosen, we may leave it as it is. Besides, the symbol may have a semantical effect. If it really looks like a tomb stone, it should remind you always:

"You can't take it with you!" (see footnote)

We may now write



But we have a little very versatile verb to have of which we are going to hear a lot more in a later chapter. I have a book does not indicate ownership outright, but it stands between this and temporary ownership. It has a "smaller" meaning and this is indicated by minimizing the symbol for ownership.



This looks much better, and incidentally it should help us to a saner attitude towards the ownership of books. Many of our books are only collecting dust on our shelves, to be sold, when we are dead. If you have some books, which you do not need for constant reference, give them to some friend with the proviso, that he may tender it to another friend, and so on.

Footnote. The mathematical plus in the above symbol for possession, is not the symbol for the cross. For the semantographic symbol for religion and the relation of semantography to religion, see the chapters p.565ff, and 576ff in the third book. Here below it is shown, that it is simple to type the symbols for the different religions:



(236)

FOR THOSE WHO SAIL THE SEVEN SEAS

"The confusion of tongues at the tower of Babel was insignificant in comparison with that which hitherto prevailed in transmitting messages at sea, Now the ships of every nation employ the same code."

Chalmers Journal 1891 (12)

Passengers on any ship and sailors speak in many tongues, but most of them only in their mother tongue. Directions and notices are usually written in 3 or more languages, English, French, Spanish usually, but many travellers can't speak any of them. International symbols on ships may therefore be considered a necessity. To acquaint passengers of any language with the meaning of the symbols, the shipping agencies may give them a small leaflet which show the symbols and their meaning in say 10 different languages, for instance:









one leaflet covering the Latin tongues: English, French, Spanish, Italian, Portuguese, Roumanian, Ladino, Rhaeto-Roman and a couple of other languages.

Another leaflet may cover the Teutonic languages: English, Dutch, German, Danish, Norwegian, Swedish, Flemish, Islandic, etc. etc. A third leaflet may contain the slavonic languages: Russian, Ukrainian, Polish, Czech, Slovakian, Slovenian, Serbian, Croatian, etc. etc. A fourth leaflet may contain the tongues of the Middle East written in the Latin alphabet like modern Turkish, and also in the Arabic letters, including also Greek in the Greek alphabet and all other important tongues of the Near East. Another leaflet may cover the languages of East Asia, of Africa, etc. etc.









All leaflets would be valid for any agency, any line, any ship and any port. One printing would do for the whole world. But the various shipping lines may excel in their special editions and they may even include the symbols for the International Menu Card (see later chapter) This would be a very important item, to be sure. Furthermore the symbols for Money, Banks and Business (see later chapter) also symbols for railway travel, passport, customs etc. (some already shown on page 224 - 227) could be included.

The following lines show only a few symbols, but the reader may get the impression that there would not be any difficulty to invent appropriate symbols, based on the basic symbols of semantography to cover any meaning. To be sure, words in English, Spanish and/or the native language may be printed underneath the symbols.

We start again from our symbol of hold, showing a bowl outline, and leading straight to the hold of a ship.

			
vessel, bowl, hold	boat, ship	water	□ float / floating / afloat
			
sailing ship	sail	flag	pennant

We may now employ the little pointer (see page 115) to point at details.

			
bow	fore-deck, fore-castle	stern	after-deck, quarter-deck
			
mizzenmast	bottom	keel	funnel



open



enclosed



harbour



dock



lock, sluice
(water diff. level)



inside



outside



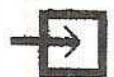
room, cabin



luggage (wanted) in
cabin (sign on tags)



inside ship
below deck



into



out of



embarkation

or
simply



embarkation



disembarkation



start



stop



embarkation-
starting-time:



food, feeding
(mouth-earth)



1.0 : 7.30 - 8.30
breakfast served:
(time first feeding)



departure
off



approach
onto



ship will be off
at:



ship will approach
ADEN at about:



ship will stay
in COLOMBO for:



passenger



paper



ticket



cabin no. 15



bed no. 3



cabin with 4 beds



steward



deck no. 2



dining room



waiter



drink glass



drink waiter



bar



telegram



cable office



telegraphist



arrow direction
sign: proceed to



to dining room



stairs



to staircase up

(230)

bath, bath-tub
(vessel holding water)

bath room

rain
(water down)

shower room

fabric, cloth
(woven threads)

towel



soap

hot
(fire radiation)cold
(opposite)GENTLEMEN
(signs on public conveniences)
see also lock mechanism on doors →

LADIES

free, open
(the door lock is coupled with the turn-
able bar of the symbol. The lock closed turns
the open symbol into the closed symbol)

pivot



engaged, closed

bed linen
(fabric for bed)headrest of bed
(pointer)pillow, cushion
(fabric f. headrest)blanket
cover (roof) fabricmoney
(rod of Mercurius)

purser

library
(very many books)

librarian

medical
(rod of Aesculapius)

medical man

first aid
stationor
simply
in
red paint:

red Cross



sailor

3rd officer
(3rd man)skipper, captain
(Sailor No. 1)captain's table
(displayed on table)

steering wheel

steering room
bridge

stop

no admittance
(stop before room)

We could form the symbol for steering wheel with basic symbols only: wheel directing forward move ship, but the above auxiliary symbol (as displayed on the coats of sailors) is much simpler.



machine



ship engine



First Engineer



engine room



stove, furnace
(fire in enclosure)



stoker



steam
(water up)



boiler-room,
(steam in enclosure)



air
(sky & nose)



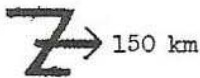
wind
(air in motion)



ventilation
(wind & pipe)



ventilator
electrical



wind 150 km
(per hour)



wind NNW
(NorthNorthWest)



depression
(air below normal)



waves high
rough sea



weather
(sun & rain)



past future
(see p.187)



forecast, prophecy
(mind & future)



weather forecast



sound
(ear & earth)



no sound!
Don't disturb!



electric sound
bell(aux. symb.)



press button (arrow near
real button is sufficient)



Safety road-sign
(international)



Safety Warning!
(in semantography)



alarm bell



alarm sound



rowing boat



life boat



life boat nr. 3



to stairs and life boat
nr. 2



shirt
(aux. symb.)



life vest



ring
(geometrical)



life belt

PICTORIAL SYMBOLS FOR SAVING LIVES AT SEA

We are now going to learn a new basic symbol which should stand for to obliterate, to blot out. If we want to obliterate a page of writing we just cross out like this ~~X~~ the written lines. As this cross would interfere with our symbol for multiplication we shall be satisfied with one line only.

If we want to cross out, to obliterate, these written words, we just draw one line across, like this

and this oblique line gives us our basic symbol for to obliterate, to blot out, to extinguish



to cross out, obliterate, extinguish,



fire



sign on and to fire extinguisher



abandon ship

Now we can form a few lines in semantography to be displayed in all cabins, etc. for informing the passengers of all languages what to do, when the ship must be abandoned.

	<p>SAFETY PRECAUTIONS when abandoning ship</p>
	<p>On hearing the electric alarm bell ringing intermittently - - - - -</p>
	<p>take and don life vest which you will find below your bed</p>
	<p>and leave your cabin, proceed along the arrows to staircase and life boat nr.1</p>
	<p>think calmly and rest assured in your belief that your safety is cared for.</p>

The triangle symbol says even more than that. It is the basic symbol for Creation, Belief, Religion and Creator, as will be shown in a later chapter. This is an age old symbol which has been found on temples and churches of bygone times.

This concludes 5 pages of symbols to be used on ships of all nations. These examples should suffice to convince us, that we can form symbols for all necessary meanings to be conveyed to multi-lingual passengers and crews.

Sooner or later such international symbols will come in use. In fact, they are already in use as distinctions of the different tasks of a naval crew. We can observe the symbol for the steering wheel, propeller, radio electric sign, etc. etc. on the coats, collars, shoulder straps, and sleeves of naval officers and ratings of the navy and merchant marine.

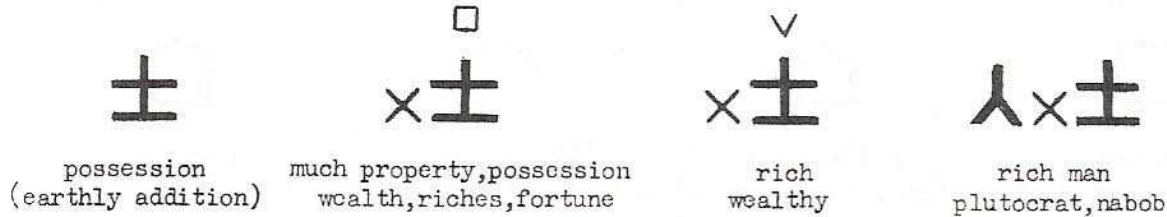
Moreover, the seafaring people were the first to use and appreciate a symbol language which could be understood in all languages. The International Flag Symbol Code is now in use by all seafaring nations. One day they will go forward and extend the scope of their international symbols and then semantography may come in handy.

RICH AND EDUCATED

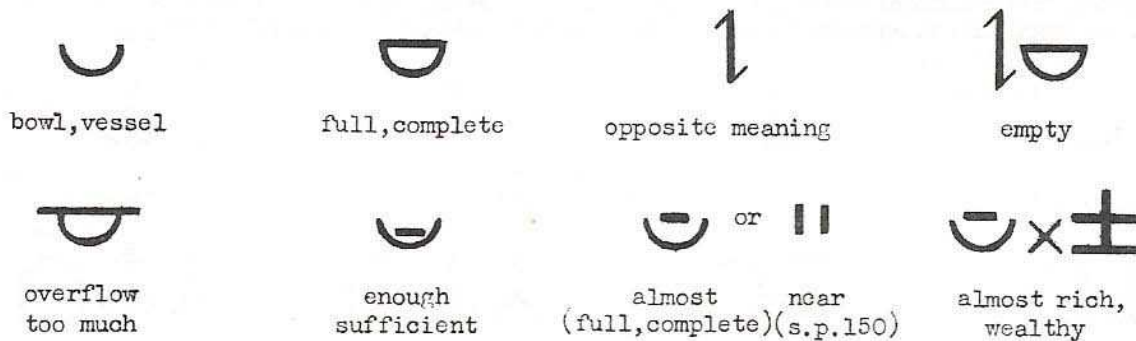
"Rich he was of holy thought and work"

Chaucer

We have learned in the foregoing chapter the symbol for earthly possessions, composed of the basic symbols for earth and addition, indicating an earthly addition. We may now use the little multiplication mark to multiply earthly possessions.



But of course, the meaning of rich has a wider sense. A man can be very poor in regard of earthly possessions, but he may be rich in the spiritual sense. We must therefore confine the above symbol (which ^{is} like a tomb stone), to earthly riches and find a symbol wider in meaning. Let us return therefore to our basic symbol of the bowl, the vessel, the hold. Before we find our new symbol we can construct a few VALUE words which we use very often in our daily speech.



These are all VALUE words, very vague in meaning. When someone says: This is too much for me; or This is enough; or I am fully convinced, or I am almost fully convinced, we realize that these meanings are relative and they must be understood with reference to the mind, who said these words. However, if mathematical figures are introduced, something we can measure, the volume of a bowl, a box, a theatre with a definite number of seats, we can give to the words full and empty a very definite meaning in exact mathematical figures - but not to the meanings of enough and almost. But even with full and empty we can play! "A theatre was half full" or half empty and it sometimes happened that a full theatre was gatocrashed and a few hundred people found still room between the aisles and along the walls. Was the theatre then really full?

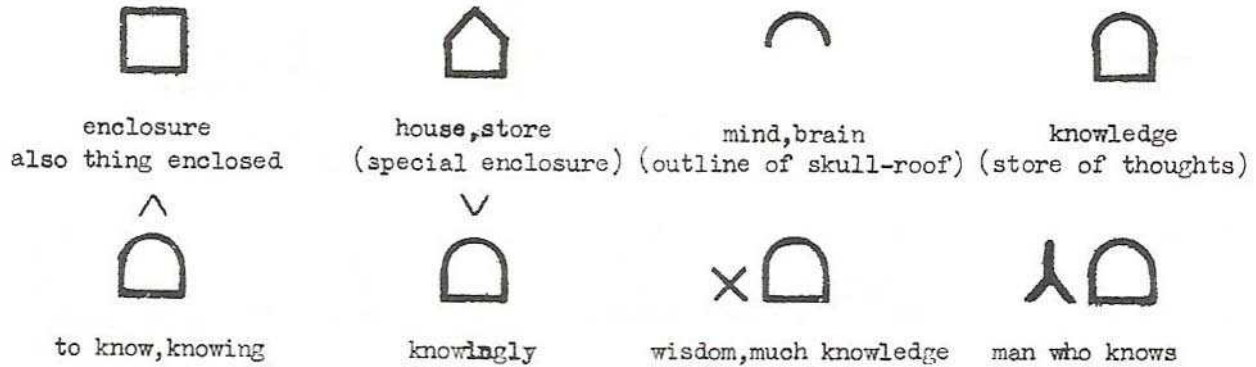
If we now try to find a symbol for rich in the spiritual sense, we must realize that this meaning refers wholly to a sense reaction, to a feeling, a reasoning, wholly relative in meaning and different with different individuals. How to outline this?

We may refer to the wisdom of the Chinese, who say of a man who is rich, contented, satisfied with life: his rice bowl is full. In their ideographic writing, the bowl is not ~~mere~~ discernible, but we can depict it easily. Rich in the spiritual sense is a state of the mind, when you think that your bowl of life is full

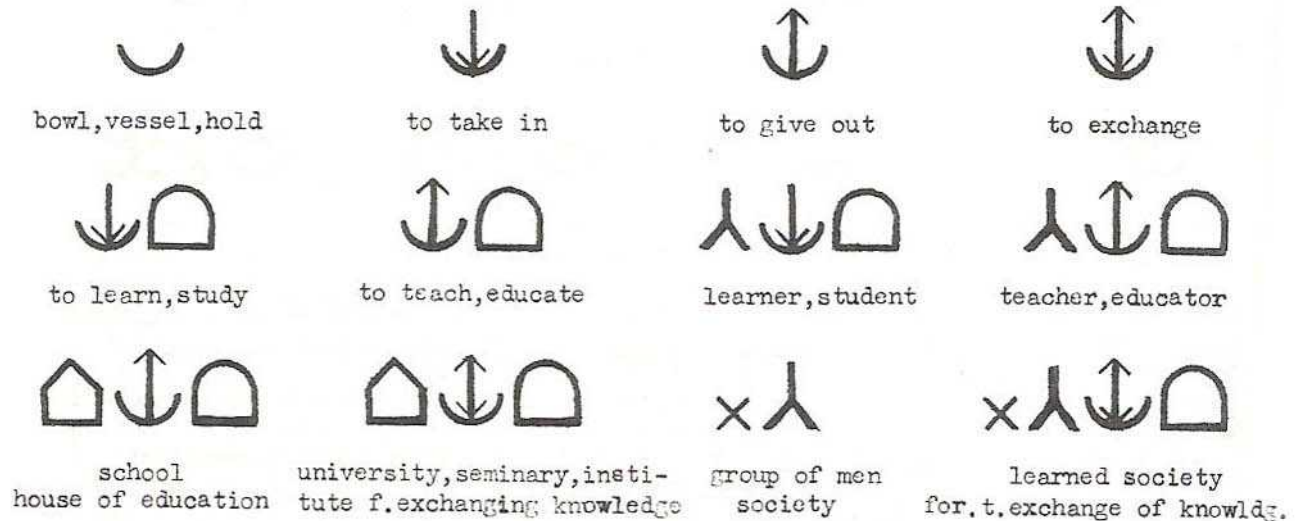


(242) This is a nice symbol and simple too. Moreover you may discern the sun in it, or if you wish, a full and happy face, grinning from ear to ear. In a later chapter we shall see that the symbol for life has an interesting similarity. These symbols should help us in reminding us that satisfaction and contentment are meanings which originate in our brain. However, the symbol shows us also a bowl, a real thing, and we know that a full stomach, a full rice bowl is necessary too, but how many people who have enough to eat, are satisfied and contented? Only knowledge and wisdom can help us to bring about the contentment of our mind.

The symbol of the mind and the bowl can be used to express knowledge, learning and teaching, as well as wisdom. Our mind is like a house, an enclosure in which are stored up all our experiences, our learning, our knowledge.



To learn and to teach means to take and to give knowledge. And a school is a house where knowledge is taught, is given. We have learned already the symbols for take and give.



Later on, we shall learn the symbol for science and for the diverse sciences and then, we should not have any difficulty to express all the necessary meanings in the realm of education.

All the above symbols show the symbol of the mind, and this indicates at once, that the meaning to learn, and to educate are somehow relative in meaning. In fact, there is great divergence of opinion in different minds of what kind of knowledge is to be taught; a glance into the books and magazines on education shows us in a flash the great battle which is fought there.

Moreover, great men have time and again expressed their ignorance. There is Socrates (I know, that I don't know), there is Du Bois-Reymond (Ignoramus, Ignorabimus) and many others. Wise men are humble, only the men of little knowledge believe they "know". Would it perhaps be better to remind them that their knowledge is "questionable"?



Every answer closes an open question, but in most cases, the question mark looms behind the answer given. And behind all our knowledge about this world of ours, there looms overwhelmingly the WHY? The question mark within the symbol for knowledge should release a semantic reaction, should drive us on in our quest for truth, should make us not satisfied with any answer and should make us aware of the question marks further ahead.

There is another point which needs our grammatical consideration. Sometimes we come across a specimen of homo sapiens (man who knows) of whom we learn, that he has been educated in the finest schools of the country, up to 15 years or so, yet all the toil of the best educators seems to have been in vain. He has been educated, but now he reveals that he is not educated at all. In the coming chapter we shall learn how to express in symbols this "grammatical difference", which seems to be a "physical difference".

THE BREAKABLE AND BROKEN HAMMER

"Even with us today, we can still watch participles passing over into adjectives."

Ernest Fenollosa (31)

Let's go back to the silversmiths in the bazaar of Bagdad (page 191). We hand the smith a disk of soft hammerable silver and ask him whether he is able to hammer it. Now we are sure that he is able to swing the hammer and let it go down in active ACTION. But we may not be sure whether the piece of metal will stand it passively. If it does, we say: "that piece of silver is hammerable". However a disk of glass is surely not hammerable. It would break at the first stroke. However if we have a thick piece of glass and hammer gently, it may be said that the glass is hammerable. This shows that the word hammerable is an EVALUATION word. But it is one which is definitely linked up with a physical ACTION.

We are fortunate in regard of the English word, because in this language, the new VALUE (QUALITY) word is formed in a very simple way, by adding the ending -able which says right away that the subject in question has the ability (able) to stand passively the ACTION of being hammered. It is hammer-able.

The English ending -able is of French heritage. To hammer means in French marteler. But hammer-able means in French mallé-able. Mallé means however ductile. In Teutonic languages, for instance in German, the ending is not formed from the meaning able. Hammerable means in German haemmer-bar. But -bar does not mean able.

Now the physicist may point out differences in the word hammer-able, which are unrecognizable grammatically. We had one disk of silver, one disk of thin glass, and now we add one disk of a very hard steel alloy. We are able to hammer actively, and all three disks are passively hammer-able, but with different physical effects. The silver disk will be deformed, the glass disk will break, and the steel disk will show no deformation of any kind. Now we realize that the word hammer-able is ambiguous. It means first that the subject can be hammered at (with or without any physical result). But the word hammer-able means too ability to be deformed, or deform-able.

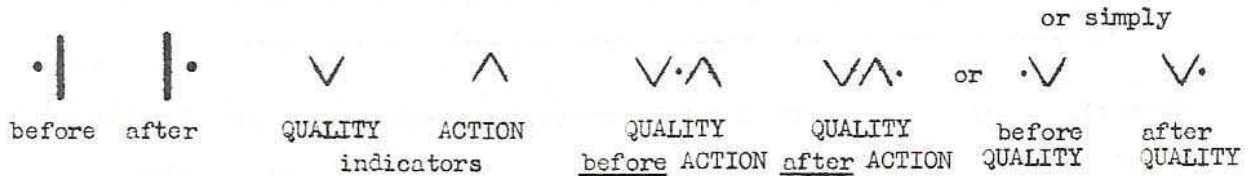
Now let us look at the past hammering of the three disks. They all have been hammered. They all are hammered. In the same way we may have painted them (in the past). We can then say: "They all have been painted. They all are painted. But whereas the word painted, indicates a clear physical deformation (a covering with a layer), the word hammered means a physical deformation with regard of the silver disk. It may mean a deformation in regard of the glass disk (but only if we have succeeded in breaking it), and it may mean no physical deformation (and no physical change) in regard of the steel disk.

We can hammer or batter at a door, and the door will become a hammered door, or a battered door, meaning a door which has been hammered in the past, without leaving any trace of deformation. But the words may also mean a wrecked door.

In conventional grammar it means that the word hammered can be a past participle (indicating a past ACTION), or an adjective, a QUALITY, VALUE word. In ordinary language we use the same word, but in semantography we must point out the physical difference.

(244) In the foregoing chapter we have tackled the symbol for education. Now take the example of a father who has wasted a fortune for the education of his son. The best teachers, in the best schools, aided by the best books have done their utmost in their ACTION to educate this boy. During 15 years he has been educated, and he leaves the school, an educated young man, although he passed the examinations with the lowest possible marks, an act of generosity of the teachers, who have spent great energy in their action to educate this boy. But has their action transformed the mass of his brain (so to speak)? Not at all. We may realize that he is the most un-educated man we ever met.

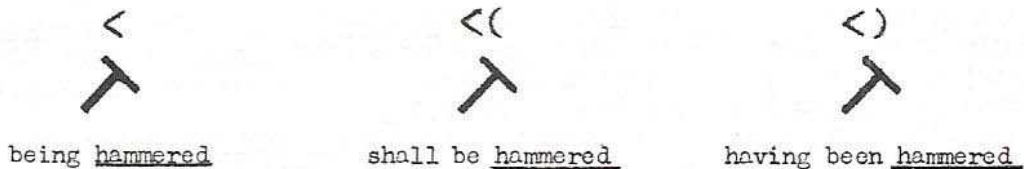
It is simple to indicate the above mentioned differences in semantography, if we adopt the view point of the physicist and realize, that the word hammerable means a QUALITY word before an ACTION, and hammered means a QUALITY word after an ACTION (but only if transformation of the MASS has taken place). Otherwise it means only an ACTION which has taken place in the past. The indicators for ACTION and QUALITY and the symbols for before and after (differing by the position of the dot) will help us to formulate the new indicators.



Now we are able to indicate a past ACTION (past participle) and a QUALITY acquired after an ACTION.



This refers of course to active ACTION: I hammer, I shall hammer, I hammered. If we want to indicate active ACTION expressively, we have to turn around the indicator ∧ thus > and then we have the indicator for active > and passive < ACTION. (see p.188)



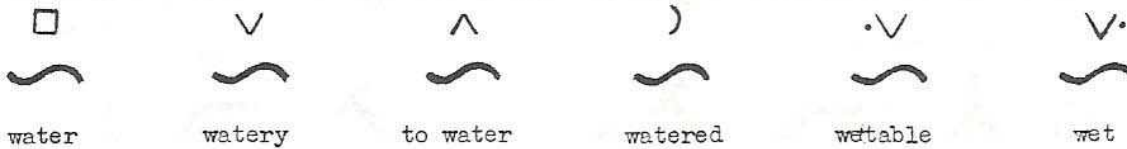
Now hammered becomes grammatically a "passive present progressive participle" or a "passive present perfect participle" in distinction from a "past perfect participle". But don't bother with these grammatical distinctions. The symbols are simpler, and the above line of symbols could be used for instance by the unperturbed and undeformed steel disk, which can say! "I am (being) hammered, I shall be hammered, I was (having been) hammered, - but it had no effect on me!"

Now to the silver disk. It has been hammered, and it did had an effect on it.



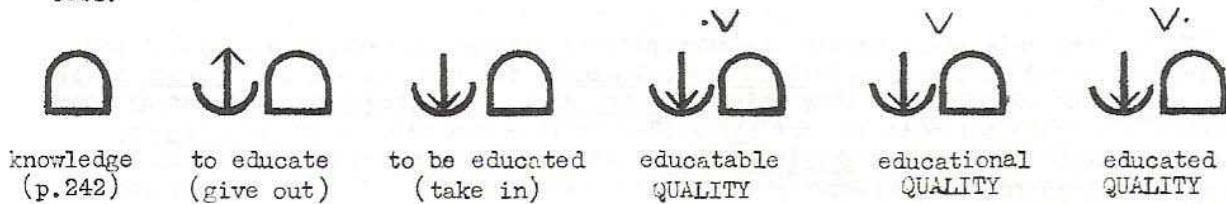
These two symbols should only be used when the ACTION referred to, has any physical or chemical effect on the object. Then the object has the QUALITY hammerable before the ACTION and the QUALITY hammered after the ACTION. Whether a piece of matter is hammerable or not, may be evaluated differently by different brains. But we can overcome the vagueness of EVALUATION words by employing mathematics and other sciences. We would then find that that piece is not hammerable with a hand hammer, but is hammerable with a steam hammer

The practicability of these two new indicators shall be demonstrated on a few examples. Let us take the liquid water. We can water surfaces. They were then watered. But not all surfaces will become wet. Waxed surfaces are not wettable, just as certain surfaces are not paintable with certain paints but can become painted with special paints.



Watery is an EVALUATION which we may make to evaluate the QUALITIES of some other liquids, which we evaluate water-like, watery. Wetable and wet are EVALUATIONS which we make with reference to objects which respond passively to a treatment with water, just as a metal sheet of silver respond to the treatment with a hammer.

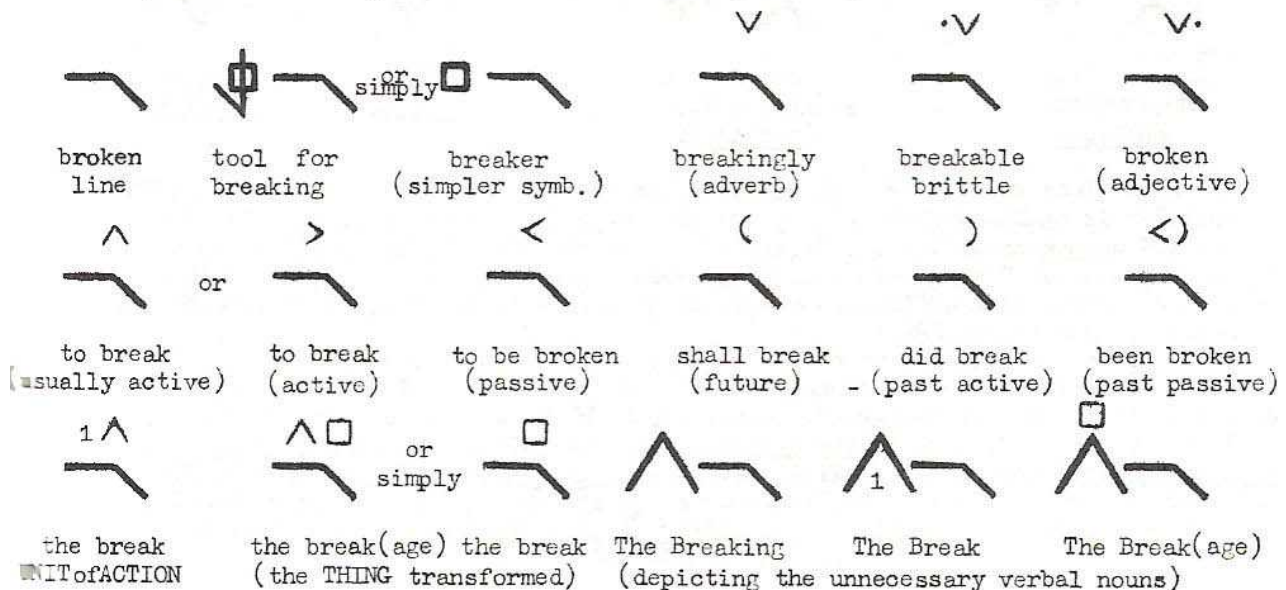
Or let us take that un-educatable boy who does not respond to the treatment with knowledge. The teacher gives out knowledge and the boy takes in knowledge. In these symbols, the opposite direction of the arrows indicate somehow the active and passive process.



A stone is not educatable. A monkey or a dog are educatable. A boy is educatable, of course. But if all the treatment with knowledge has not transformed his mind, then he has not acquired the QUALITY educated.

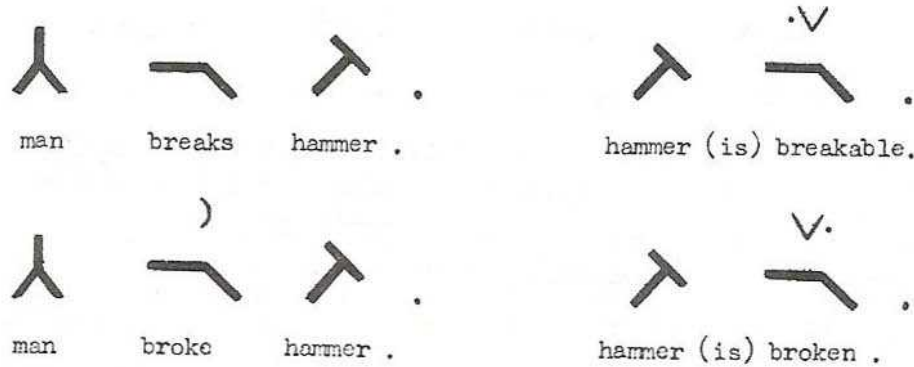
Now, the new VALUE indicator with a dot behind, is definitely bound up with some physical ACTION which must have taken place before. Nevertheless the word remains a VALUE word. In the example educated the symbol of the mind is also shown, which makes the meaning wholly relative. And many minds may differ vehemently whether somebody is "really" educated or whether the action of the teachers have been spent in vain.

Many ACTIONS leave no trace on the object, for instance to see, to contemplate something, etc. The ACTION which plays a great role in many activities of man, and which has a very definite effect is to break. Here the transformation of the object is final and remains visible, long after the ACTION to break has ceased. This visibility, for instance of a broken rod, shall give us an important symbol. Here again we may study the ENERGY-MASS word The Break, which means not only the UNIT of ACTION word, but stands also for the MASS transformed, The Break. And herebelow is a last recapitulation of the grammatical symbol indicators, which we have learned in past chapters.

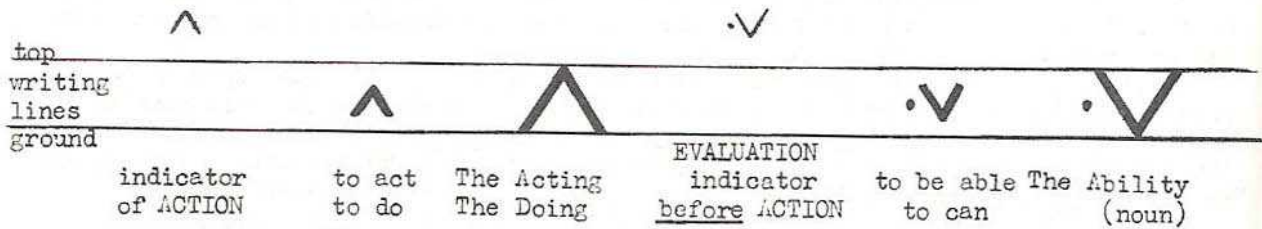


The diligent reader may already be near the breaking point, or already broken under the strain of this wild grammatical array of symbols. But he may rest assured, that this is the last chapter of such a kind. Finding grammatical symbols, which should somehow suit all languages, is no easy task, and the reader may therefore forgive some drabness.

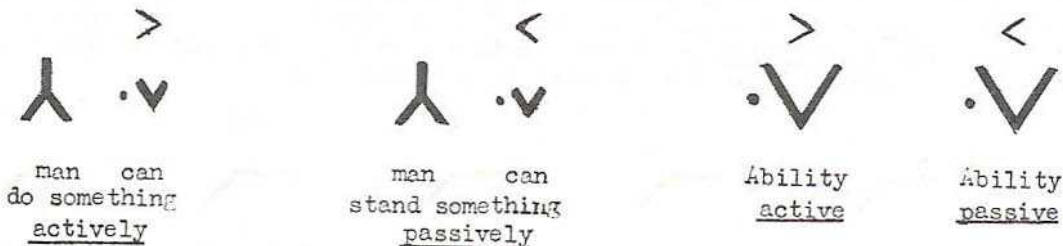
Now, let us put our knowledge to practical use in writing the following sentences:



We may end this final chapter on conventional grammar by forming our symbol for a word, very often used by people: I am able, I can. As these words are used before people undertake the ACTION which they think they are able to do, they can do, we can use our EVALUATION indicator with the dot before. Surely if a man says: I am able, I can, he makes an EVALUATION of his abilities. I can indicates a verb, and we shall haul down our indicators: to do work between the lines. We thus can form also our symbol for to do, which means to act.



Man is able in an active and passive way, and we can depict this by pointing the ACTION indicator in one or the opposite direction.



How many times do we hear such words: "I can do this and that, I am able to stand this or that." It is an EVALUATION made by the speaker, and we should realize that it is an EVALUATION before an ACTION (as "pointed" out by the dot point). As long as the talker talks only, without "going into ACTION" we need not take his words seriously. Only when he follows his words with ACTION, and a successful ACTION to be sure, has he removed the vagueness of his EVALUATION.

In all talks on politics we hear words, brought forward with deepest conviction, like: "Russia can do this; America cannot do that." It's a human EVALUATION all right, and different brains may differ greatly about it. The EVALUATION symbol indicates this.

On the other hand, there is the negative aspect. People sometimes say: "I am not able, I cannot do it!" They should realize that this negative EVALUATION - is an EVALUATION only, wholly vague in meaning. Try, Brother! Do it! Act now! Instead of an EVALUATION, do some real physical ACTION! Your disability may turn out an unreal EVALUATION.

MONEY AND BUSINESS

"In some far off future there will be a new language, used first as a language of commerce."

Friedrich Nietsche (4)

"Merchants engaged in international commerce suffer even more than scientists from the want of an auxiliary international language. Besides increased expenditure of time and energy they have to bear increased expense for interpreters and for special clerks needed in their foreign correspondence."

Max Talmey (22)

Trade in finished goods is today not more confined to the so-called "civilized" countries. The natives of some African coast, who sell raw hides & ivory will buy gramophones and records. South Sea islanders whose only income comes from copra will be interested in radios and other appliances. The millions of small traders who have their shops in jungle villages or high up north, are mostly illiterate. Somehow they manage, but sooner or later they will feel the necessity to be able to read those delivery notes & invoices, the writings on boxes and drums, on tins and bottles. Directions on merchandize are a necessity, should the buyer handle the thing he bought properly.

The illiterate merchants make some signs on their boxes. Sooner or later international commerce will have to provide them with a written sign language. Symbols which somehow depict the real things, symbols which are simple like the scribbling of children, symbols which would be readable on any merchandize sent to any part to the world, understood in any language. Some symbols are used already, f. i. a glass for fragile.

Missionaries and teachers try to teach natives some sort of alphabet, which in many cases they have to adopt to the special sounds of the native languages; sounds which are not to be found in the English language or other languages and therefore the alphabetical signs are not suitable; just as some of them are not suitable for European languages, which have therefore special letters and signs like á â ã & etc.

But the alphabet which a missionary has invented for some tribes, may not be valid for other tribes on the other side of the mountains, and after 50 years or so, they may not be suitable any more for the shifted pronunciations of the tribe's language for which they have been invented. Only a symbol writing ^{could} avoid this.

The idea of a common language for all peoples has long since ^{been} abandoned. We know now of the irresistible force of the mother tongue and we have ample proof of its strength in the many millions of inhabitants of the United States, Canada, South America and other countries, who still speak Italian, Greek, Ukrainian, Russian, Swedish and other mother tongues, although the language of the country (English or Spanish) exert a daily influence. There is no hope that the 75% of the 2 billion people living in this world, who cannot read and write, and the others who can read and write in one language only, would learn a world auxiliary language like Basic English or Esperanto, in a not too distant future. But a sign writing which they can read in their respective mother tongue, and which is easy on the eye and the mind, may fill the gap.

Films are now invading the smallest village. Hollywood has turned to 16 mm projection of all the films, which are shown with a portable projection outfit even in Java and Congo villages. Sooner or later Hollywood would have to think up some means for sub-titles, which would convey the meaning of what is going on. In a later chapter practical examples of such sub-titles are given.

But why go so far? If you go on travel and come into a foreign country, which language you cannot speak, you will pass from one trouble to the other. You go into the bank, but you cannot read the inscription over each counter. You go into a department store and you have difficulty to find the department you want to go to. Or you have to go to the customs and present some papers, bills of lading, invoices, your passport, etc. etc.

Then you will realise that you can read international symbols like 1 2 3 4 5 6 & % £ () - + etc. in the foreign country and the people there can read the same symbols in your papers, although they cannot read your language.

Then you may realise that a conscientious effort on the part of international banks, industry and business organisation towards an international "sign writing", a "symbol language" may bear fruit. Of course it may take some time, until people would understand it, and governments, schools and chambers of commerce will have to

do some work, but somehow it would be child's play, because the symbols are alike those drawings which children scribble anyway. Besides, underneath the symbols should be the meaning in the native tongue, as shown in previous chapters (see p.104).

In this chapter, symbols are shown which could be displayed in banks and business organisations, shops and offices, not only on the walls or over the counters, but also in invoices, delivery notes and in the end, in correspondence with countries, for which the business firms have not a special linguist ready.

Readers may easily reject the symbols to be shown. Only if you know the outline and the meaning of the basic symbols and how they combine to compound symbols - only then do these symbols become meaningful to you and almost self-explanatory.

Basic symbol, in the widest sense, to all trading is the medium for interchange: money. Looking around for an appropriate symbol for trade and money we find an old symbol on many bank notes, on many banks and commercial buildings, as well as on any allegorical mural, depicting industry and commerce: the rod of Mercurius.



The rod of Mercurius
Messenger of Jupiter
God of the Merchants

A simple schematized outline of this design will furnish us with the symbol for money. Its combination with the bowl, vessel, hold, already employed for give, take and exchange will give us a simple symbol for trade, commerce, business.

money	to exchange (in and out of bowl)	trade, business	trader, merchant businessman
group, company (many men)	trading company	limited	trading company limited
paper (in connection with) money	part (line divided)	share	company on shares
to hold money	holdings	THING (any thing)	goods merchandise
past future	for (purpose) (see next page)	holding money for future saving, reserving money.	savings reserve

) ()))
	↓	↓	□ ↓
past future (indicators)	given out (past) delivered, shipped	received (past)	receipt voucher, docket (paper)
↑	□)	(
↑ 8	↓ 8	↓ 8	↓ 8
to pay, payment the ACTION	payment the THING, money	paid (past)	to be paid (future)
^)))
↓ 8	↓ 8	□ ↓ 8	□ ↓ 8
to receive money ACTION	received money (past)	receipt (paper) for money received	receipt (paper) for goods received
⊗	↓ 8 ⊗	↓ 8 ⊗	↓ 8 ⊗
time limit interval	borrowing money	a borrower	a lender

The above symbols refer only to credits and debits due to the lending and borrowing of money. If, however, you are a creditor, because you have to receive money, in some near or distant future, for goods delivered, services rendered, a much simpler symbol can be used. You are then a man who has to receive money in the future. We could, of course, write the symbol for creditor the other way round, namely a man who has paid out money in the past, but this would also refer to a man who has made a donation, and will not receive it back in the future. The symbol for future is relevant in regard of credit and debit.

((((
↓ 8	↓ 8	↓ 8	↓ 8
credit to receive m. in future	debit to pay m. in future	a creditor he shall receive m.	a debtor he shall pay m.

↓ 8 +	↓ 8 -	8 +	8 -
profit, plus, gain	loss (minus)	assets	liabilities



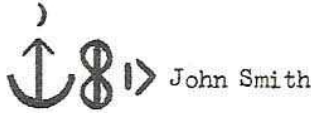



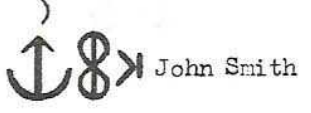
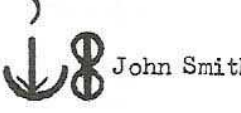






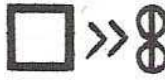



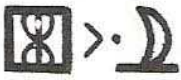

8 +	:	8	-	⊗	⊗	⊗	⊗
assets :	cash	land	houses	machines	goods	money to come in	

8 -	:	↓ 8 ⊗	↓ 8 >> □ ↓	↓ 8 >> % 8 P
liabilities :	loans received	{ payment } for goods received. (to be made)	paymt. for taxes (percentage for state)	









SIMPLIFICATION OF SYMBOLS AND SYMBOL CORRESPONDENCE

(259) In the last compound symbol: payment for taxes, the symbol for the particle for should have been written twice, because the symbol reads: payment to be made for percentage of money for state. On the other hand, the symbol for for could be left out, if people are already acquainted with the compound symbols. In later chapters we shall deal in detail with these particles. It is however necessary to point out how the symbols for the particles are derived. Some readers may think that misunderstandings may occur. For them, the little particle may be added, to make it doubly clear what is meant.


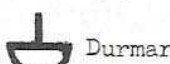







The meaning of the little particle is derived from a "greater" meaning, and consequently the particle symbol is a small symbol, compared with the big symbol for the "greater" meaning. Look, how simple it really is.

MEANING	derived PARTICLE	APPLICATION	OR SIMPLY
 start	 from	 payment from John Smith	 John Smith paid.
 end arrival	 to	 payment to John Smith	 John Smith received
 relation (mathematical a > b)	 of	 man of store house	 storehouse man
 purpose (intensified relation)	 for	 enclosure for money	 safe
 position (relation to certain point)	 at	 safe at night	 night safe

These examples, which are an introduction to the chapters on the particles, should suffice to show, that we can use those symbols to make our compound symbols clearer if this should be found necessary. In the coming chapters however, we shall refrain as much as possible from such help. If semantography is generally adopted, the meaning of many compound symbols would be deeply ingrained in the minds of the people who use it, and therefore, the additional particle symbols would not be necessary. However, should it ever come so far, that semantography shall be used for business letters with people in odd countries, speaking an odd language, than full use of the particle should be made, in order to make the meaning perfectly clear. Herebelow is a sample of such writing.

 Money received for purchase of seeds . Goods forwarded from London to Surat

 in(at) ship Durmar on(at) the 16th April, 1948. Cable about(on)reception of goods.

It can be seen at a glance, that most particles could be omitted - if the correspondents are already very familiar with letters written in semantography. The simplified lines would run as indicated below, and - by the way, they could be sent by cable. Today radio-photo is an accomplished fact, and photographs are transmitted with amazing clarity in details. Sending off a few lines in simple black lines of semantography would cause no difficulty. In fact, it would eliminate a lot of trouble caused by errors which slip in at the transmitting and receiving stations in the transfer of ordinary cables in alphabetical writing. The clerk in London would type the cable in semantography, and the pictured slip would be transmitted faithfully to the trader in Surat, who can't read English, but who recognizes the outline of the words London and Surat, and can read semantography.

Received money purchase seeds Goods forwarded London-Surat ship Durmar

16 - 4 - 1948 Note: Compare this simplicity with the catastrophic TELEGRAPHIC CODES in use which need special training for coding, decoding and translating (see p.266).

on the 16th April 1948. Cable reception of goods.

Now, some readers may think that such business letters and cables written in semantography will not come about, because they are not a necessity. However, businessmen who work in smaller countries, like Roumania, Bulgaria, Greece, Finland (it's Europe, not a country somewhere in India or Africa) those businessmen, who are born in those countries, can understand only the native tongue, and very often they want to write a letter to a great firm somewhere in England or America. In their little country town, where they have their business, there may not be any translator at hand, and in any case, he would charge a fee. I know this from own experience. As a boy, I handled the correspondence of my father, and quite often we had to refrain to make contact with some far away business firm. Such simple symbols would suit the businessmen, even of European countries.

But there is another field, where such symbols can play a great part: the banking business. Only a traveller, who finds himself lost in a foreign bank, unable to read the inscriptions on the different counters, unable to ask for information in the native tongue - only a traveller would appreciate signs in banks which could be read in all languages of the world, and in the following pages such examples are given.

SIGNS IN BANKS

"The world could hardly get along today without international travellers' checks. Similarly it will not long continue to endure the inconvenience caused by the lack of international communication."

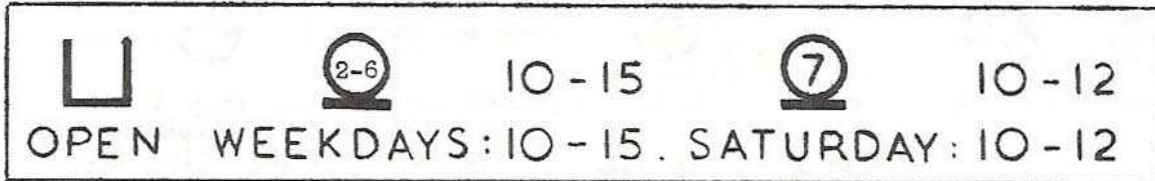
Walter D. Head (44)

Some readers, who intend to start to read this book (and - by thumbing through the pages, may look somewhat bewildered on the following signs), may perhaps be sceptical. For those readers, however, who have faithfully followed the book up till here, the symbols may look almost self-explanatory. They may think, that a traveller should have not much difficulty in finding the right counter, especially if he has with him a little leaflet covering the symbols for banks.

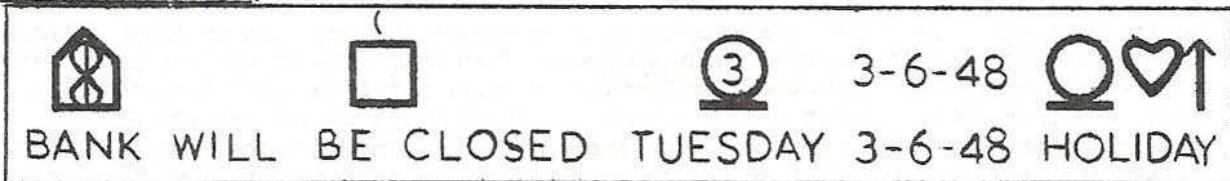
Now, these bank signs are not an original idea. I saw them in operation in China. Not the symbols in semantography, but in the complicated Chinese characters. Banking is highly developed in China, and we should bear in mind, that China was the first country in which paper money was invented and used, some thousands of years ago. A merchant from Peking or Canton, cannot understand the language spoken in Shanghai. But in the banks of Shanghai, he could quickly orientate himself, because the signs on the counters are the same as in his home town, and the paper he presents, written in the ideographic writing of China, could be understood in all languages of China.

Yes, the idea would work - if the international bankers decide to use it.

The following examples show signs which could be displayed in all banks of the world, with the meaning in the native language underneath. First, the signs outside the bank building:

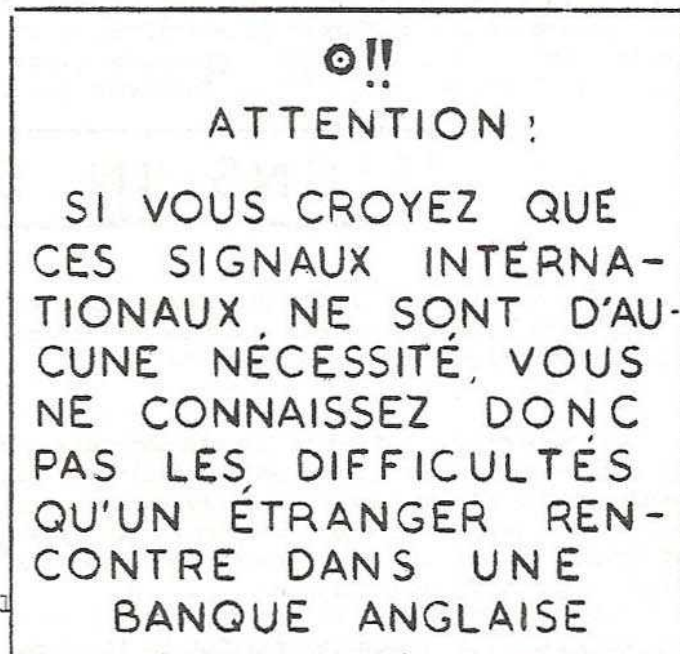
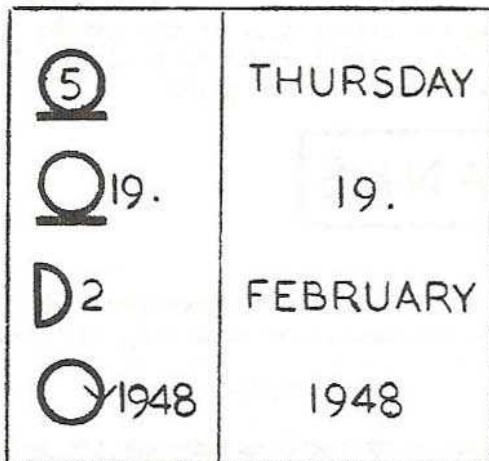


The day is signified by the sun over earth. Saturday is the seventh day (in line with the Bible, and in accordance with many millions of Christian people) Sunday is the first day (and it may be regarded so in many respects) Monday is the 2nd day, up to Friday which is the 6th day of the week. See the chapter on an international calendar on page 105 ff.



3rd June 1948

Inside the Bank there are the innumerable calendars, which can be internationalized:







The poster on the right, written in French should be considered as a joke and as a lesson to some people, who may think that all those international symbols in semantography are wholly unnecessary. Those people may think

that the word SATURDAY is so full of meaning, that a symbol for it, may be a waste of time and effort. Of course, the word SAMEDI (which means Saturday in French) or SAMSTAG or SONNABEND (which two words are two German version of the meaning of Saturday) are wholly meaningless to them. The translation of the above poster in English runs:











Attention ! If you think that these international signs are not necessary, then you don't know what difficulties a stranger encounters in an English bank.

			
percent(Age)	interest	discount	bank rate









We have now to learn another particle symbol for the meaning of for. It is not the for which we find in the words: for the purpose, and which symbol we derived from the symbol of purpose (see page 250). The for we need now, is the for in the words: in exchange for. We shall therefore derive our particle symbol from the symbol for exchange.

		1   2.50 \$	etc.
exchange	(in exchange) for	1 chair for 2.50 Dollar	

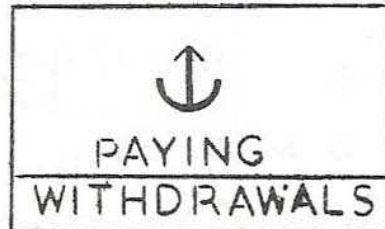
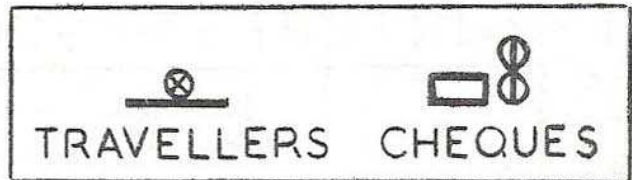
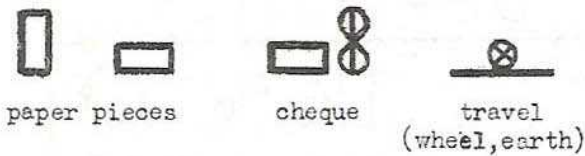
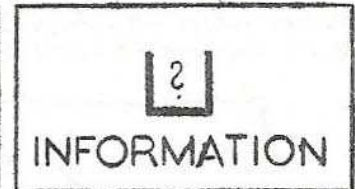
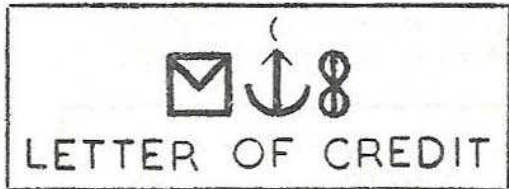
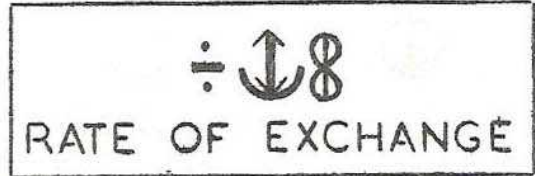
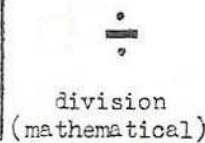
Now we can write interest for deposits. If we make a deposit in a bank, we get in exchange interests. The percentage of this interest depends on the time, during which we leave the deposit in the bank. Here then is the notice which we find in every bank.

				
INTEREST FOR DEPOSITS				
		.....	1 1/2 %	
SAVINGS DEPOSITS			A YEAR	
		6	D.....	1 3/4 %
DEPOSITS	HELD	6	MONTHS	
		1		2 %
DEPOSITS	HELD	1	YEAR	


The symbol for year indicates the sun completing a full cycle. Now the signs for the counters to which the foreign traveller is primarily attracted.

							
paper piece	paper money	disc (geometrical)	coin	Gold	Silver	Nickel	Copper

The symbols for Gold and Silver coins are not needed nowadays. In any case, every boy and girl learn in school the chemical symbols for the metals and elements.




Herebelow is a specimen of a cheque form.

UNION  BANK #265910

NOT NEGOTIABLE

Day Month Year

PAY 

or holder

(\ abc) £ (\ 123)


Name

\ pen \ abc means: write alphabetically \ 123 means: write in numbers

If anybody thinks that the "only" and "true" form of the cheque needs no improvement, he does not realize that cheques have different forms and are handled differently in some parts of the world. Instead of writing the sum in alphabetical writing, a part of the cheque (divided in little squares arranged in lines, and indicating 1000, 100, 10, 1, etc.) is cut along these lines with scissors. This gives the sum at a glance, and makes forgery impossible. In China, the signature has no value and is disregarded. A signature, the Chinese say, is easy to copy, but their seal, cut in stone, glass or ivory, is almost impossible to imitate, as every cut shows certain distinct deviations.

Below are other symbol compounds related to cheques. A cheque book is an accumulation of many (multiplication mark) single cheques.


CHEQUE BOOKS


PRESENT CHEQUES HERE

In the last symbol, the sign for money has been deliberately omitted. These signs are shown in a bank, where all transactions are connected with money anyway. Thus the symbol compounds can be further simplified. We shall omit the symbol for money also in the symbol for account. The symbol for a paper leaf and the bowl will indicate account.

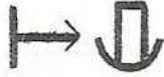
  
paper leaf hold bowl trade business






ACCOUNTS

 
book LEDGER


 
LEDGER INQUIRIES CHIEF ACCOUNTANT


transfer to account



NEW ACCOUNTS
Start Account









   
Stop Closing account scale balance balancing an account

   
account plus overdraft overdraft limited to 250 £ settling account





 
to repeat, copy to duplicate paper copy duplicate


DUPLICATES


STATEMENTS

 JOHN SMITH				
 Date	 PARTICULARS   Who? What?	 DEBIT gone out	 CREDIT came in	 Balance

EVERY MEANING IN BANKING CAN BE EXPRESSED IN SYMBOLS

First man Bankman part Department
 (part of bank)



DEPARTMENT
MANAGER



CORRESPONDENCE DEPT



time limit
interval



LOANS DEPT

As shown in the last sign, it is not necessary to show the symbol of Department. These signs are on the door to the respective departments. The word Loans is sufficient.



BANKDRAFTS

cheque (oblong paper)
issued by bank




CLEARING

exchange
between banks





to cover
protect (roof)



SAFE CUSTODY



roof over hold, bowl

doubt certainty
(doubt crossed out)



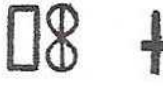
SECURITIES


writing secret
pen (mouth closed)



CODE DEPT.




paper in con. part
with money share



SHARES

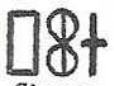


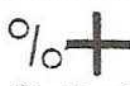





STOCK EXCHANGE





BONDS

state
(flag)
shares of state

 Shares	 Buy	 Sell	 Dividend
---	--	---	---



between a go-between commission
 (dot betw. lines) agent, broker brokerage


before after





late, after time





payment overdue









part payment

money to be paid before margin
 advance money part advance money

much more to increase to increase margin
 increase (to be increased)

minus gratis penniless to cross out business bankruptcy
 without without payment without funds to blot out

SIGNS IN SHOPS AND STORES

"Not a few business organisations engaged in foreign trade are urging the speedy adoption of some means of direct communication among different nationals."

James F. Abel (75)

The following symbols may be appreciated by business representatives whose job is to conduct successfully shops and department stores situated in international ports and other towns, visited by an international public. But there are towns situated in areas with a multi-lingual population. As usual, there are sharp controversies raging in such areas about all questions pertaining to signs on public places. Such questions have even found their way into the peace treaties after first world war. The old Austrian-Hungarian monarchy was tolerant in such questions, and in some provinces public signs were written in three or even more languages. But there were more than 20 different nations living in this empire. When it broke up and national states were formed, they too had to go the same way. Paper money in Czecho-Slovakia were printed in up to 6 different languages. In Roumania there are 12 languages to consider.

It is clear that signs in a symbol writing would be neutral to all nationalities and would solve problems like these.

In this chapter we are concerned with signs for shops and department stores; however these symbols can also be used for commercial correspondence. People who speak English are apt to underrate the necessity of such a correspondence, because English is a world language and great business houses have their English correspondents. But take for instance business houses in Vienna or Prague. They do business with all countries of Central Europe and South-Eastern Europe. Before the second world war, German was used for the international correspondence, but this is definitely out now. These firms can't employ correspondents for the Greek, Bulgarian, Slovenian, Croatian, Serbian, Hungarian, Slovakian, Roumanian, Ukrainian, and some other languages.

The same applies to labels on merchandise. If you are a manufacturer and you have a shipment (ready for Roumania and fitted with labels in Roumanian) suddenly cancelled, you can't divert it for sale in Greece or Hungary, unless you unpack every tin and box, scrape off the label and paste on another.

But all these troubles refer only to Europe, the cradle of culture, school education and literacy. How about India or Africa, where hundreds of different tongues are spoken, and where not only most people are illiterate, but where no alphabet has been yet designed for many tongues.

Only a symbol writing, which show the outline of things, which is almost self-explanatory could be the solution. From this point of view let us now evolve the symbols for shops and stores.



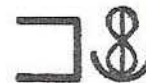
trade, business



business house



room



business office



street



room open to street



shop, store



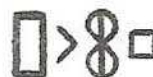
store house



buy



sale



order



invoice

(first money, then thing) (first thing, then money) paper on "buy"

paper on "sale"

SYMBOLS FOR THE VARIOUS DEPARTMENTS IN A STORE



price
money for thing



dear
much money f. th.



cheap
(opposite meaning)



BARGAINS



FOR FOREIGNERS

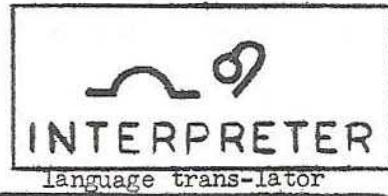
dot indicates outside state (flag)



language
(mouth & ear)



bridge
trans-...



INTERPRETER

language trans-lator



world
(sky & earth)



world-writing
(pen)



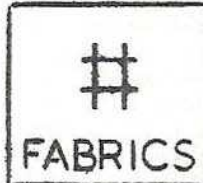
ISSUE OF LEAFLETS
ON THESE SIGNS

giving out leaflets in semantography



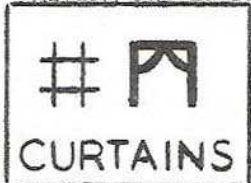
WHAT LANGUAGE

referring to leaflets in semantogr. and words of a particular language



FABRICS

woven threads



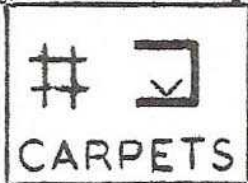
CURTAINS

fabrics f. door, etc.



BEDDING

bed



CARPETS

room

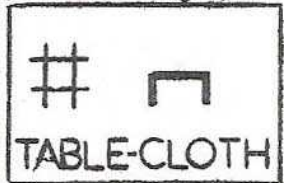


TABLE-CLOTH

table



cover



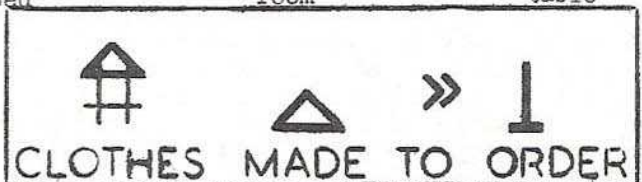
clothes



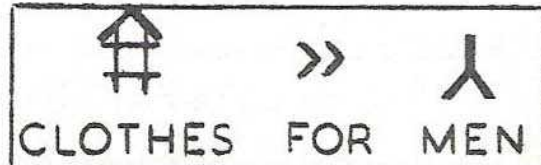
to make



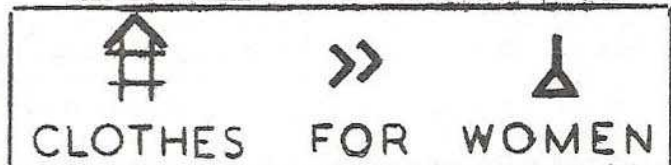
individual



CLOTHES MADE TO ORDER



CLOTHES FOR MEN



CLOTHES FOR WOMEN



flower



big



small

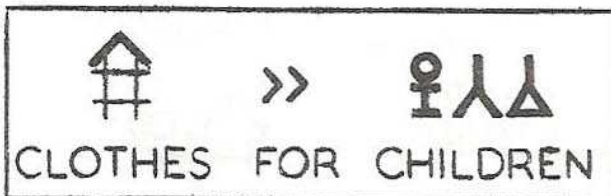


young

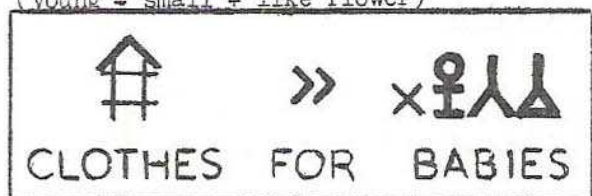


much young

(young = small + like flower)



CLOTHES FOR CHILDREN



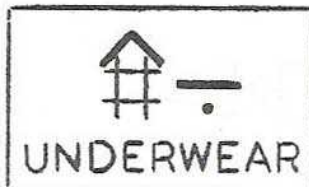
CLOTHES FOR BABIES



under



over



UNDERWEAR



OVERCOATS




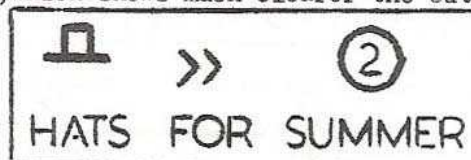
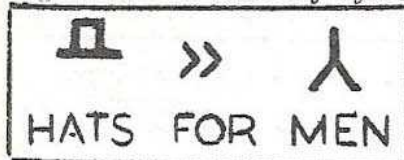
RAINCOATS

We have used most symbols composed of basic symbol elements, but here and there we have also used an auxiliary symbol, for instance the symbol for curtain, showing the outline of door and curtain. We could easily depict this meaning with basic symbols only, for instance, fabrics for windows, or fabrics for openings in room, or house. The symbol for bed is an auxiliary symbol too, and could be expressed by symbol elements as: place to sleep, or tool for sleep, or similarly. Strange as these circumscriptions may seem at first, once the meaning of the symbol compound is grasped, the picture of a bed will soon come into our mind, wherever we see the symbol compound place & sleep, or tool & sleep. Anyone who has acquired the knowledge of even a few Chinese characters, knows that the cumbersomeness of them disappears completely, when you are very familiar with them. The complicated symbol is looked over in a glance (just as a piano player can take in at a glance, the most complicated chords, when reading a musical piece and playing it) and immediately the picture of the real THING appears in the mind.

Department stores and shops could use the symbols of semantography, provided that they do not indulge in inventing fancy symbols of their own, which would confuse people. Each auxiliary symbol should be agreed upon by an international academy, which would watch over the development of semantography. Such an academy would be the Institute for Semantography.

In the following lines it is shown, how some auxiliary symbols could be chosen, although it is always possible to express the meaning with basic symbol elements only.

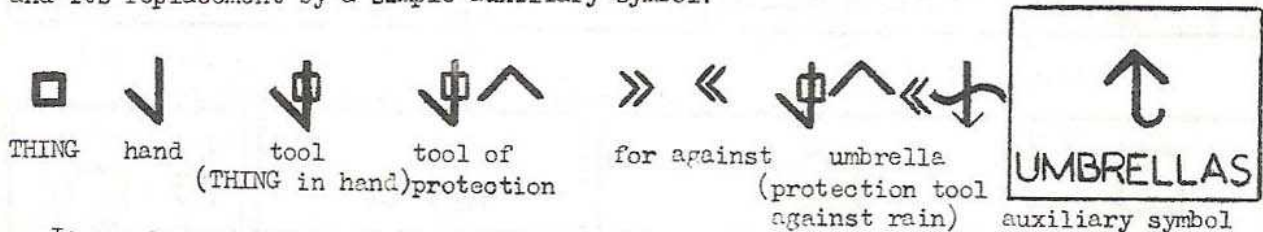
The meaning of HATS for MEN could be expressed  In fact, the roof outline looks actually like some hat Chinese farmers wear. Moreover, a hat is really a roof, a cover, a protection for the head of the man, who wears it. But the roof outline appears already in the symbol for clothing, indicating there cover, coating, coat. If the roof symbol would be displayed on hat departments, the public will get soon used to it, just as they get used to the odd expressions of returning officer, fire escape, health remedy (indicating something which remedies health) and thousands of other words in all languages. We could therefore use the roof symbol to indicate a hat. But we can just as well agree to an auxiliary symbol, which shows much clearer the outline of a hat, for instance:



Sun & 2, indicating 2nd season

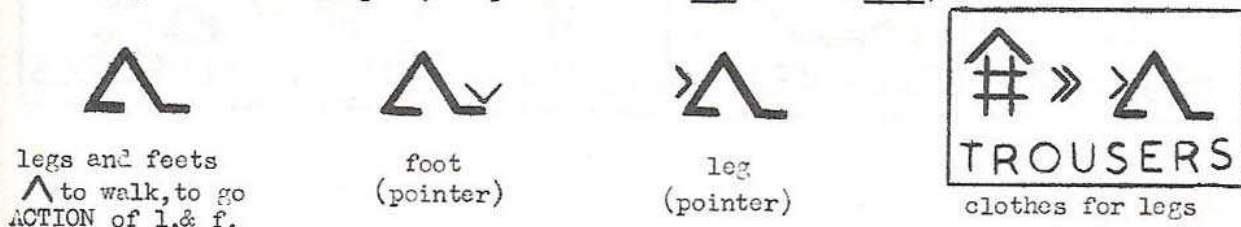
Pointer ind. place next to water

Herebelow is an example of the development of the basic symbol compound for umbrella and its replacement by a simple auxiliary symbol.



It is obvious that such an auxiliary symbol is to be preferred, not only owing to its simplicity, but foremost, owing to the fact, that it will be much easier recognized. Moreover the symbol as it is, appears in itself a composition from basic symbol elements. There is first the symbol for the roof, then the symbol for a stick vertical line, and a small curved line is added, (of which we can readily dispose, if we wish to do so.)

The following symbol is actually a repetition of an Egyptian hieroglyph, and our little pointer will help us, to point out the leg and the foot.





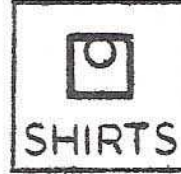
fabrics f. feet



fabrics for legs

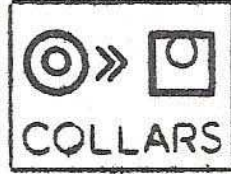


cover for feet



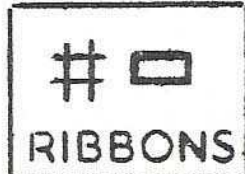
SHIRTS

auxiliary s.



COLLARS

ring (geometrical)



oblong strip of fabrics



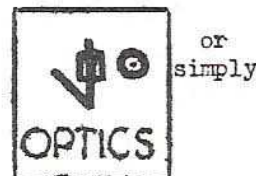
ribbon for men



smell (nose) heart-uplifting (happy)

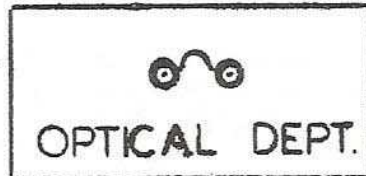


beauty (eye, heart up) ^ ACTION indic. to make, become beautiful



tools f. eye

or simply

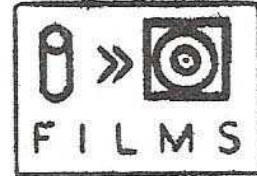


outline of glasses



CAMERAS

light (sun, eye) enclosed in box



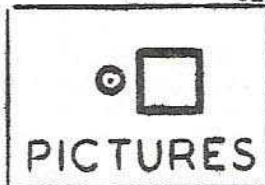
FILMS

roll (cylinder) for cameras



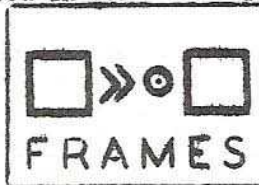
PHOTO STUDIO

^ ACTION of using a camera



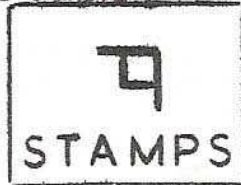
PICTURES

eye looks on square



FRAMES

enclosure f. pict. see postal symb. (p. 122)



STAMPS



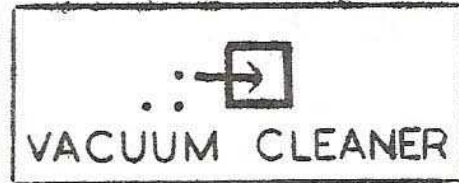
ELECTRICAL APPLIANCES

tools, electrical



LAMPS

light (sun, eye) electrical



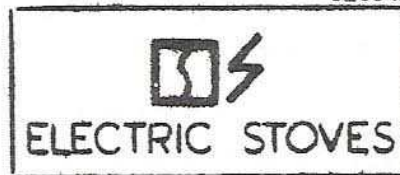
VACUUM CLEANER

dust (three dots, see p. 120) moving into enclosure



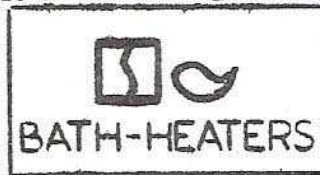
STOVES

flame in enclosure



ELECTRIC STOVES

electricity (lightning)



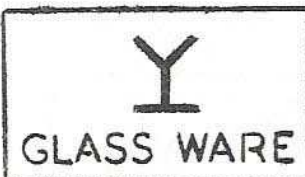
BATH-HEATERS

bath (a vessel & water)



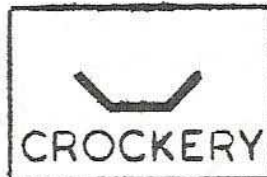
FURNITURE

chair table



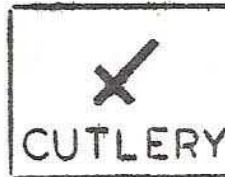
GLASS WARE

outline of wine glass



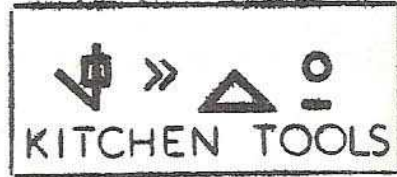
CROCKERY

outline of plate



CUTLERY

outline of knife





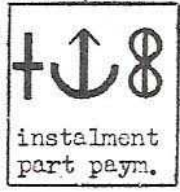
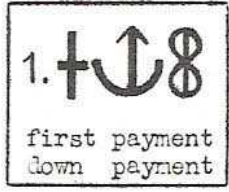
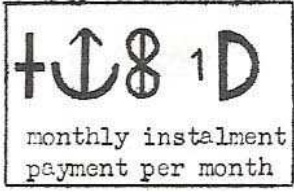




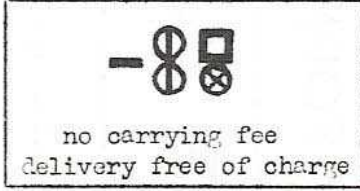













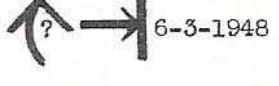
KITCHEN TOOLS

tool for making food

These examples chosen at random should convince anybody that it is possible to form simple symbols, either from the basic symbol elements, or by adopting an auxiliary symbol which is almost self-explanatory and could be understood in any language.

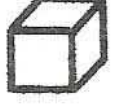
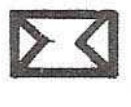
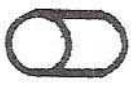




Critics may say, that such signs are unnecessary in a shop, where the customer could see the goods. True enough. But this is not the case in a department store, with many floors, where a stranger has to consult the directory to find out in which floor he can find the goods he wants. If there is no interpreter, and if he cannot speak the language of the country, he has to make frantic gestures, until he is understood. In using semantographic symbols, he would simply write it down on a note paper. If anybody scorns this idea, I wish to tell him, that I have seen this procedure in practical operation in China, even in small shops, where many goods are not displayed.

To end these examples of symbols for a retail store, here are a few more, to be used either on tags, or on bills, etc.

					
payment	part	instalment part paym.	first payment Down payment	monthly instalment payment per month	
					
wheel	THING	to carry, transport	carrying fee	no carrying fee delivery free of charge	
					
bill of lading (document f. transport)	approach	arrival	to bring to fetch	delivery note (paper)	note of arrival (acknowledgement)
					
protection for future	insurance business	premium	policy		
					
insurance against fire (flame symbol)	transport insurance	war risk insurance (crossed swords)	insurance stops on the 6th March 1948		

These examples may suffice. In a later chapter we shall learn the symbols for life, death, accident, sickness, etc. etc. and then it will be easy to draw the symbols for all sorts of insurances.

On the following page an attempt has been made to draw up an international form of an invoice, etc. for customs purposes. Similar forms for any other commercial and transport purposes can be drawn up. In fact, there are already all sorts of symbols in use on such forms, on the boxes, drums, cases, etc. Herebelow are a few auxiliary symbols for the various kinds of enclosures, used for transporting the goods.

						
case, box (usually wooden)	parcel (us. paper)	drum (us. big)	tin (us. small)	bag sack	bottle	piece (1 THING)

INTERNATIONAL CUSTOMS INVOICE FORM


Invoice for customs

	Date of Dispatch	Unit of Enclos.	# Number of Signatures	Weight of Unit	Total Weight	What Goods?	Price	Unit Money	Unit Woods	Total Sum
25 - 8 1948	20	(case)	1-20 M.B.	6	100	Sulfadiazine	11.25	\$	kg	1125.00\$
10 - 9 1948	50	(1 piece in 1 parcel)	101-150 A.C.	18	900	(Radio sets)	46.00	\$	10 (pieces)	2300.00\$
16 - 11 1948	100	(bags)	7-100 R.S.	50	500	NaCl (Salt)	-,-2½	£	lbs	5.4.2 £
22 - 5 1948	10	(case) 1000 (pieces)	21-30 K.B.	20	200	(Condensers)	-2.3	£	10 (1 p.)	1125.-,£
30 - 8 1948	15	(pieces)	1-15 G.M.	1240	18600	Chevrolet (Motorcar)	950	\$	10 (1.P)	14200.-\$

The words in English (especially those in brackets) are written only for the better understanding of the symbols

This form is only a crude example. Many columns are missing, for instance for full and net weight, the amount of pieces in one single case or parcel, etc. etc. The example shown is limited by the size of this page. But this example should show, that efforts in this direction could meet with success. It may be said, that the customs official is familiar with the meaning of the different columns. This may be true with forms with which he is familiar, but he fails with forms from small, out of the way, countries. But the great difficulty does not lie with the customs official. It lies with the exporting firm. They may get a form, without knowing what the headings mean, and even if the headings are written in the language of the firm's employees, there may still be doubt, what is meant. Innumerable jokes are circulating about people filling out a column of an official form, the heading of which they completely misunderstood.

indicates the outline of a chemical retort and means Chemical (see later chapter)



DIRECTIONS ON MERCHANDISE

Symbol elements: paper page, mind, tool (thing in hand) thing in hold

Only a few examples are given below, but they should suffice to demonstrate the practicability of the idea. Now, no one expects that manufacturers and department stores should give up printing directions on their packages, boxes, tins and apparatuses. On the contrary. They should go on making their labels and plates as before, but they may add to all the writing the symbols too. Below the last line, they may add another line, showing the symbols and giving the words for the occurring symbol elements. There would be even enough space to add the equivalent words in French and Spanish.

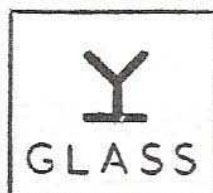
Such a procedure would have a manifold effect. First, it would be a demonstration that the firm is progressive. Great stores in the United States are now displaying, together with their goods, paintings of contemporary and much debated artists. The first department store to have sign boards written in semantography, and a little leaflet explaining the meanings of the symbols by nice little drawings showing the real things, and next to this column 10 additional columns showing the equivalent words in 10 different languages - the first department store to do this, would have a good scoop, worth its advertising value in hard cash. Adults and children would grab these little pamphlets, on account of the novelty, on account of the nice little drawings and/or account of having a nice vocabulary, which may come in handy, when going on travel. The last two pages may contain the 100 basic symbol elements and a few words about semantography.

In a similar way, manufacturers may add a few lines on their labels, packages and tins. Besides showing that the firm is progressive, besides cashing in on the advertising value, it would be also plain economy, because the same label could be understood also in other countries. In a few years of such constructive efforts on the part of the great manufacturing firms, they would cash in on being able to send their merchandise to all parts of the world, without the necessity of changing the labels. A firm sometimes gets an order cancelled, although the tins are already printed in that particular language of the ordering firm. It means a direct loss to the manufacturer.

To prove that a development towards international symbols is already under way, it may be referred to the word FRAGILE painted on many boxes with breakable merchandise. The word FRAGILE is already internationalized, and seasoned wharf labourers in all parts of the world may already recognize it. However, new labourers are coming daily to the water front. FRAGILE is a meaningless jumble of lines to them. So, many manufacturers have resorted to the painting of a glass (a wine glass in particular, just as in semantography).



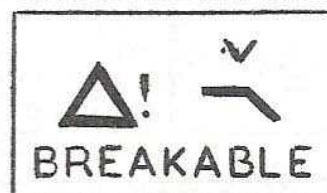
international



semantography




international on roads

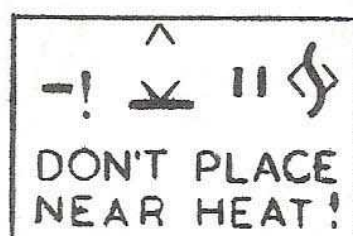
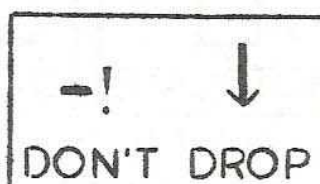
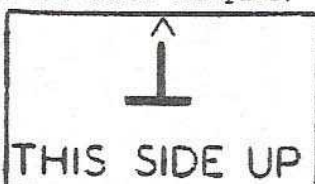


in semantography

As said before, most manufacturers use only the word FRAGILE. They may as well add the symbols in semantography. A few manufacturers use the symbol of the wine glass. They may as well use the symbol for glass in semantography, and/or the symbols for BREAKABLE.

If the symbol for BREAKABLE belongs to a set of symbols, capable to write anything - then it would be sound to employ that symbol. It would pay, even in the short run. Here are a few other examples.


 upright
 vortical
 perpendicular
 ^ make upright



The symbols on the right mean: no ! (negative) plaoing (earth) near (two adjacent lines) heat (radiation from flame, fire)

ON PACKAGES, TINS & BOTTLES

OPEN HERE

CUT HERE TO OPEN

PIERCE HERE

REMOVE TOP

HEAT TIN, THEN OPEN SERVE HOT

2 PILLS AFTER MEALS

SHAKE BEFORE USE

DANGER INFLAMMABLE

WARNING POISON

Safety Warning

flame, fire,

chemical (retort), life crossed out
symbol for life (sun and individual)
(see later chapter)

ON ELECTRICAL APPLIANCES

SWITCH

TURN

ON OFF

STOVE

LIGHT

POWER

HOTPLATE

OVEN

LEFT PLATE

RIGHT PLATE

stove w. one hotplate

writing lines
much more most

fire enclosed sun, eye

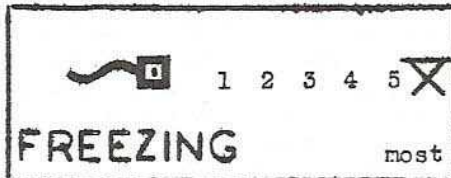
stove with two hotplates

Numbers 1 2 3 can be employed.



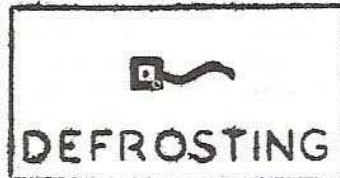
REFRIGERATOR

box, water becomes solid



FREEZING

water becomes solid



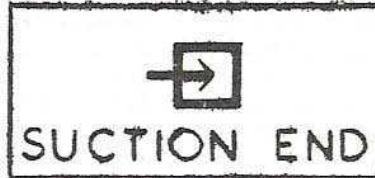
DEFROSTING

solid becomes water



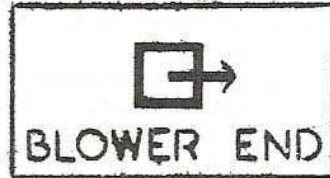
VACUUM CLEANER

dust (see p.120) into box



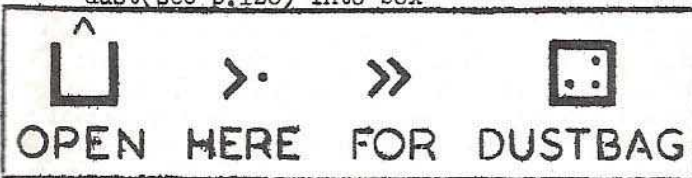
SUCTION END

into

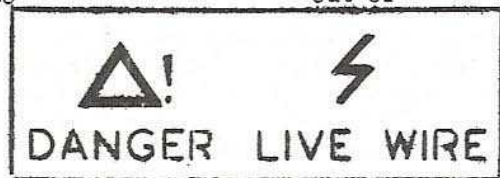


BLOWER END

out of



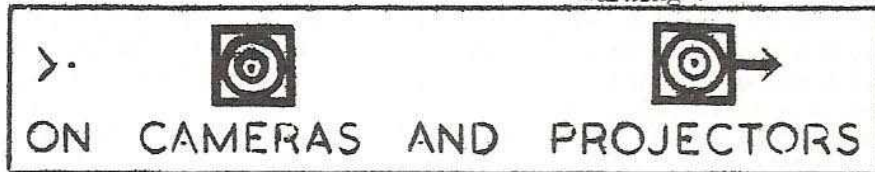
OPEN HERE FOR DUSTBAG



DANGER LIVE WIRE

Warning !

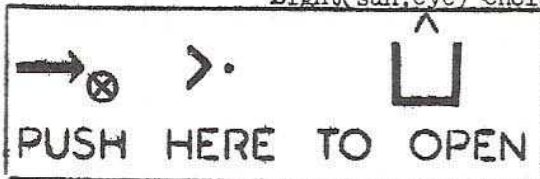
Electricity



ON CAMERAS AND PROJECTORS

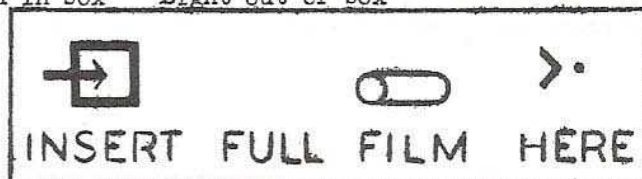
Light (sun, eye) enclosed in box

Light out of box



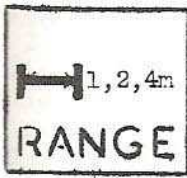
PUSH HERE TO OPEN

wheel



INSERT FULL FILM HERE

cylinder



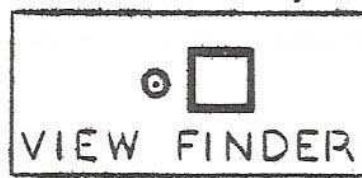
RANGE

Length (page 150)



RANGE FINDER

measuring length (p.150)



VIEW FINDER

picture (eye, enclos.)



TURN HERE



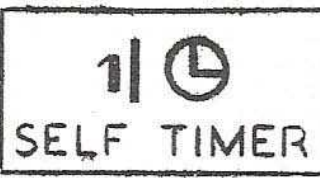
LENS IRIS

ring (geometrical)



EXP TIME

Opening time



SELF TIMER

before time



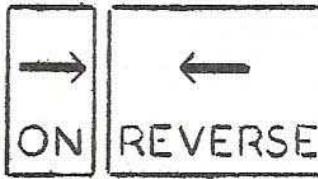
EXP. METER

measuring light

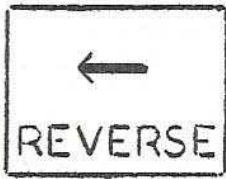


MOVIE CAMERA & PROJECTOR

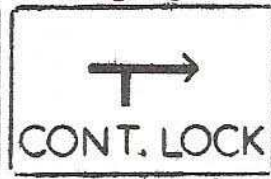
moving (wheel, earth)



ON

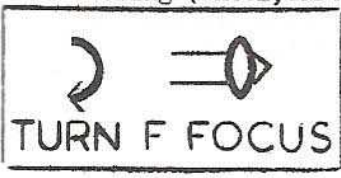


REVERSE

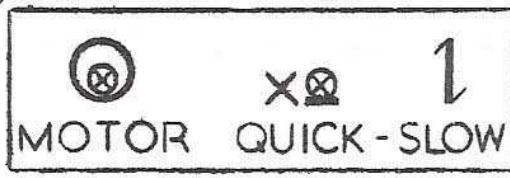


CONT. LOCK

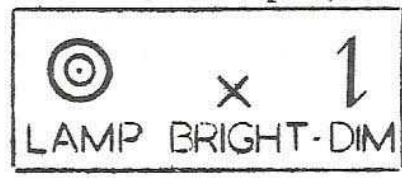
continue (p.93)



TURN F FOCUS



MOTOR QUICK-SLOW



LAMP BRIGHT-DIM

The samples on the foregoing pages may suffice to show that directions in symbol writing for any technical instrument are possible. Many manufacturers who export their merchandise to many countries, include in the package a leaflet written in 3 to 6 languages. If they arrange such a leaflet with a column containing the symbols, they could add ten or more columns showing the meaning in ten or more languages. The symbols are almost self-explanatory and in a few years time, such symbols would be common place.

However, one important factor must not be overlooked. All symbols of all manufacturers must be uniform in the basical meaning. If manufacturers would invent fancy symbols of their own, we would soon have another Babel. People who would know the basic meaning of the symbols, as explained in this book, may get bewildered when seeing new symbols, which they would not find in the semantographic dictionary. When the confusion grows, the idea itself will suffer. People would not be induced to learn the basic symbols, because - they would not fit any more to the confusing different systems then in use in different countries and by different manufacturers. We would be worse off, then before.

In order to ensure conformity and the prevention of another Babel, the symbols, their likely derivations and deviations are registered in all countries. As explained on p.66 of this, the second edition, the use of the symbols is free. Only those persons and firms who make a profit by painting, printing, engraving them by any means on any surface, will be asked to pay a small royalty which will be used for advice on new symbols and for promotion publications which in turn will help the persons and firms concerned.

Only thus can unity and complete international understanding be achieved. The alternative is chaos. Scientists, industrialists, and businessmen are practical people. They would realise that only a system which is uniform over the whole earth, can help them.

Nevertheless, an appeal to reason alone, will not bring this uniformity and co-operation. There still remains that small group in all countries and in all ages, which defy reason, out of an insatiable thirst for self-assertion.

They would have to be fought, tooth and nail, if they refuse to co-operate peacefully.

In the last chapter, the structure of the Institute and the Society is outlined. There it is also shown, how these organisations can enforce uniformity, how they can fight confusion makers, with the weapons, given by law makers in all countries: the copyright.

S Y M B O L C A B L E S

"By these written signs secrets are conveyed over land and sea."

Ovid, Heroides, 4.5

In the foregoing chapter, we have touched upon the use of semantography for cables (see page 251). Here we may outline the idea.

Since telegraphic messages came into use, telegraphic codes too, were invented, to make cables cheaper, and to remove errors, which may slip in at the transmission and the reception. These books, heavy tomes as they are, represent the first international language used in commerce. The translation of a code book into another language, gives the man who uses the translation, immediately the tool to read a cable (which has been composed in English) in his native tongue, say French. However, the Englishman who sent the cable, had to do some heavy work of coding his message, and the Frenchman must do some heavy work, of decoding it. If an error slipped in, then the decoding work may take longer, sometimes a few hours.

Moreover, there is not only one single code in operation. There are many codes, ABC, Bentley's code, Mosse's code and a host of others. If you are familiar with one code only, and you get a cable in another code, it means a lot of precious working time.

But there are other disadvantages. If you are a businessman, somewhere in Finland, or Spain, or Java, you may not be very proficient in the understanding of English. If there is no translation of the code in Finnish, Spanish or Dutch available, you would have to use the English edition of that code, and it may well be that you would misunderstand the message, even if you have succeeded in decoding it correctly.

A hundred years ago,oversea mail was delivered by fast clippers,At the ports waited dispatch riders with their fast ponnies,and as soon as they got the mail,they dashed off to the inland town,Business houses employed their own dispatch riders,It meant a lot if they got the news - although 3 months old - half an hour earlier,than their competitors..An hour later,and the purchase price may be up.

When cables began to cover the ocean beds,news came quicker,But cables were expensive,so cable codes were invented,But letters still had to go by clipper or steamer.

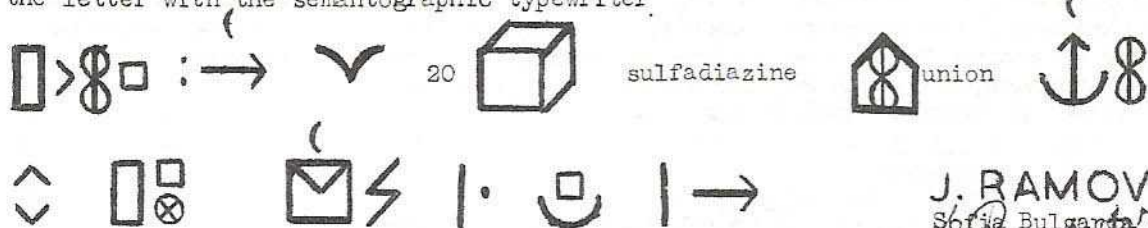
Now we have the airplane,and a letter from London to Shanghai,which a hundred years ago needed 7 months,goes now only 7 days,Even this time is too long for some transactions and therefore the cable and the cable code is much in use.

In 10 or 20 years time,a great part of todays air mail will go a different way. Radiophoto is already today an accomplished fact,A picture or a letter is exposed to a kind of television camera,which translates the various shades and lines into electrical impulses,which then are radiated by radio waves.In an instant(much less than one single second) the picture or the letter is at the receiving end across the globe.In another instant it is photographed,Thus a whole written page can be transmitted in less time than a 25 word cable.Long letters could be delivered the same day and very,very cheap.Not only business houses would use photo-letters.Anybody would do it.A father would get the scrawls of his little girl with all little sweet faults,and the picture of the girl on the same page.We all got used to many radio pictures in the daily papers,Some are of an amazing clarity.Others are not.Yet the methods and the appartus evolved are still in the experimental stage.Moreover,to transmit a picture with hundreds of details in light and shade is one thing,and a letter with clear black lines on white paper is quite a different thing.It is easier and simpler to transmit. Even secrecy can be assured.The radiophotoed letters are exposed on an

endless strip of paper,which then goes into a tank,containing the various necessary liquids,which develops,rinse,fix,wash and dry the sensitized paper.Special signals transmitted,would divide the cabled address,from the cabled letter content,Such signals would cause notches in the endless paper band,and according to these notches, the automatic machine,would cover and seal the letter content with an additional cover paper,leaving only the address free.The notch indicating the end of the cable,would automatically cut the sealed letter from the endless paper strip.The automatic machine would pour out letters by the thousands,all ready for delivery.

Anyone acquainted with modern electronic transmission methods will agree that the principal problems involved in such transmissions are already solved.We have automatic developping tanks which can develop,fix and dry a continuous film in less than 15 seconds.Special signals,for instance the S O S call,sets today complicated machinery in motion on any ship within a certain range,alarm clocks begin to ring,etc,etc. If we remember that the transmission of pictures by electrical impulses has been constantly improved during the last sixty years or so,we can be rest assured,that radiophoto letters,as described above, will come into being,perhaps in 10 years,perhaps later, perhaps even earlier.

But the difference in language will still remain,A letter in Bulgarian,or Urdu will not be understood by a man,who cannot speak those languages.Thus,semantography could fill the gap,more than any other medium,because the simple black lines of our symbols would be rendered very clear in transmission,Moreover,the symbols are almost self-explanatory.The employee does not need to do some elaborate coding,He types off the letter with the semantographic typewriter.



Affixing the firms seal and the signature makes it a legal order which doesn't need confirmation by letter.The Bulgarian employee and the boss can read this cable only in Bulgarian,but the English business firm can read it off in English: ORDER: FORWARD BY AIR 20 CASES SULFADIAZINE,UNION BANK SHALL MAKE PAYMENT AGAINST BILL OF LADING,CABLE AFTER GOODS HAVE BEEN DISPATCHED.

The English businessman may show this cable to his French associate,who would read in French: ORDRE: EXPEDIEZ PAR AVION 20 CAISSES SULFADIAZINE,UNION BANK EFFECTUERA PAIEMENT CONTRE CONNAISSEMENT,TELEGRAPHIEZ AUSSITOT LA MARCHANDISE SERA EXPEDIEE,

A G R E E M E N T S A N D T R E A T I E S

"In their declamations and speeches they made use of words to veil and muffle
their design"

Plutarch On Hearing V. (of the Sophists)

During my business career I have witnessed strange things, I had worked in the ^{legal} department of a big industrial concern and I have seen how disagreement broke out about the interpretation of a paragraph or even one word, written in one language and hotly contested in another language, spoken in the country of the contesting firm. I have seen both parties marching into court with heavy volumes of all kinds of dictionaries, and both proving to the court, that their different interpretations are justified. As usual, a dictionary quotes all different shades of meanings of a word, very often contradictory (a fast horse held fast). Imagine now a judge to whom the language of the agreement is "Greek" and who does not understand the technical and commercial meaning of a certain word in all its implications. He sees that the dictionaries are contradictory. So he turns to an "expert" for help. But the warring parties have taken care of that. They march into court, each party accompanied by an expert, carrying a many pages testimonial, very cleverly written, with lots of citations and weighty references - but, both testimonials come to opposite conclusions. If they do not contradict each other, they bring forth many arguments; the judge is compelled to appoint an official court expert. The official expert may waver between both parties. Then he may decide in favour of one. The other party will then carry the case to the higher court, and there the game starts afresh. By that time both firms may have found out that the expenses for lawyers, experts and court fees have reached unbearable figures and they may come to an agreement, in which the contested meaning would have been replaced by a clearer word.

It is my firm belief, that agreements, written in semantography, may prove a better medium, not only between firms of different language, but also between firms speaking the same language. Fallacies are not only contained in translations. Every language contains ambiguities and fallacies.

A business agreement should always be clear and to the point. It deals only with physical ACTIONS performed by and with chemical THINGS; buying and selling, manufacturing and transporting. Mathematical figures as to numbers and weights are introduced. Actually it is difficult to see how and why disagreement arises. If one party has failed to deliver goods or to make payment up to a certain date, then it is liable to pay damages or to do this or that. The party stays convicted. Yet, the party finds an excuse and sure enough, the party finds a paragraph or a word in the agreement, on which "to hook on" the excuse. Who is the party? A businessman on his own or an executive, depressed by the worry to be unable to fulfill the agreement. He sees losses ahead, and he will cling to any "straw" which may help him to avoid his obligation and to be vindicated, not the least before his own conscience. So he uses the "loopholes" in the agreement to help himself.

In very many cases, these loopholes consist in words, which are HUMAN EVALUATION words especially SENSE REACTION words. Paragraphs containing such words are sometimes called "rubber paragraphs." This refers to a condition in the agreement, which may be stretched in meaning or contracted, just as a strip of rubber. It's a vague meaning, to be sure, and in an argument, each party may use its own interpretation.

Such "rubber paragraphs" contain words like

...as soon as possible...

...as much as possible...

Both parties will do their utmost....

Both parties will consider any possibility of co-operation...

Both parties will consult each other, should...

If we write the underlined words in semantography, we will immediately see, that they refer either to a human EVALUATION, carrying the V symbol, or they carry the symbol of the mind. Any boy or girl, trained in semantography, could peruse the business agreement, and could easily point out all the vague meanings there.

Now, it should be understood that it is not necessary to write an agreement in semantography in order to find out the words with vague meanings. The knowledge of the "semantics" and "mathematics" of semantography would be sufficient. At present the people of the world have no simple method to recognize words and phrases which have a very vague meaning or no meaning at all. All such questionable words and sentences are usually beautifully phrased. They are perfect in grammar and expression. Yet, they may be very vague in meaning.

Every businessman who concludes an agreement, must use mathematics. If he is a manufacturer, he must know how many machines he has at his disposal, how much every machine can turn out per day, and how much he will be able to deliver per month. If he is only a merchant, he must consult the figures of his accounts, the floor space of his store-houses, etc. etc. He may as well use the new "mathematics" of semantography to avoid ambiguous or questionable meanings in the wording of the agreement, and - what is more important - his knowledge of semantography may make him alert, to prevent the other partner of slipping in such words, which, later on, would constitute a perfect loophole. However, if such loopholes are absent, both partners would have to see, that the agreement must be carried out, that difficulties must be overcome - in the end, a clear cut agreement would contribute greatly to continued activities of mutual benefit.

Again I want to state, that agreements may be written in the ordinary language of the country, but both should know something about the "grammar" and "mathematics" of semantography.

Treaties between two business houses concern only few people. Treaties between two nations concern all the people of these nations. And such treaties and the preliminary talks are consequently front page news. But what is in the treaties? Well, few treaties deal with the exchange of so many tons of goods against so many tons of other goods. Most treaties contain "empty" words only, with no "teeth" in it. Vague promises, vaguer assurances, vaguest affirmations. To-morrow - all is different. And because of all those vague words, the leaders of both nations believe with honest indignation that they are right and only the other side is wrong. It looks as if so many treaties are torn up, are treated as a scrap of paper, - because they contain very often only vague words which can be interpreted in more than one way. It seems that it would be a good idea to prevent diplomats to waste the nations money in obtaining such meaningless treaties. Today innumerable diplomats with a host of innumerable secretaries, experts, stenographers, are scurrying all over the world, selecting the most beautiful summer and winter resorts for their talks, occupying the best hotels and getting terrifically busy. In the end the treaty is solemnly signed in the presence of the highest dignitaries, with reporters buzzing around and hundreds of photo flashes going off. Hands are shaken, golden fountain pens are given away as souvenirs, and only few people are aware that the treaty is meaningless, that it can be interpreted in different ways and that consequently it is not worth the paper it was written upon.

The average "man in the street" is usually not aware of the worthlessness of all those activities. He reads about friendship treaties, consultation treaties, cultural treaties and is stunned. He is not aware that politicians and government leaders whose lifelong activities consisted mostly in talk, are using all those beehive activities as a camouflage for "doing nothing".

These are strong words and the author is aware that the lines written above can be attacked with the very same weapons which the author endeavours to create. True enough. But this is exactly the situation which the author wishes to bring about, namely: that every boy and girl, trained in the recognition of words, should realize, that words as such, are - from the standpoint of the physicist - only shaking the air, when spoken. If the citizen would stop listen to such verbiage, if citizen would assume the viewpoint of the chemist and physicist and would start asking: how many more schools have been opened, how many more hospital beds have been provided, what does the basic wage buy on the market, etc. etc. - then only can we expect a change for the better.

Could a treaty been drawn up in which one paragraph would read: We declare solemnly that, according to our national master race mathematics $2 + 2 = 5$. Yes it could. A people wholly illiterate, ignorant of mathematical numbers would listen reverently to such a proclamation, made from the balcony of the government bungalow.

But in countries with primary school education for all citizen, such a proclamation would be wholly impossible. In the same way, a people trained in semantics, would not be deceived by many treaties of today. More about all this in the third book.

THE ABUSE OF PATENTS

The idea of an international patent written in semantography

For some years I was manager of the patent department of a large concern. I had to read thousands of patent specifications in different languages. I had to supervise the launching of patent applications in different countries and I had to defend our rights in many courts. Gradually I became aware that the protection of the ideas of creative individuals is today of little or no value to the individual with small means.

No wonder, inventors go to the dogs. They have no chance. It is impossible for an individual with small means to have his idea protected in all countries of this small planet, and to make use of this protection. Only a very large firm, who can afford to spend millions on applications, fees for attorneys, fees for patents, fees for lawyers, fees for court proceedings, etc., etc. can have any benefit from our present day patent laws. The inventor with ideas, but without money is hopelessly crushed.

One step forward would be the creation of an International Bureau for Patent Rights which would issue one International Patent valid over the whole globe. We have already such an International Bureau for Trade Marks and for Copyrights. However a trademark consists only in one single word, which can be easily registered, and easily examined in regard of the existence of earlier rights. The examination of the content of a patent application is much more difficult. Comparison has to be made with earlier specifications, which as often as not, are written in a different language. Dictionaries are of little or no avail in many of such cases. Think of publications in Hungarian, Greek, etc.

It is mainly the language problem which stood in the way of the creation of an International Patent. A specification written in clear, geometrical symbols of semantography may be the medium to overcome national and linguistic misgivings. The symbols are understood in any language. All words pertaining to human EVALUATION and SENSE REACTION, liable to be interpreted differently, could be easily recognized and removed. Patent specifications contain usually words of a decriptive character.

The idea is worth contemplating.

The International Bureau for Inventions would receive only one specification written in symbols of semantography. This application would be carefully examined by technicians, who have at their hand the most complete library of world-wide technical publications. If they grant a patent, it should then become valid in all countries. If the patent is contested, it will be contested before an International Court. Today the court of one country declares a patent valid, but the same patent in another country is declared invalid. All this makes no sense at all.

Such an international patent application could be afforded by any craftman and any engineer. The International Bureau would consist of many specialists, who, knowing what is going on in their special field, would be able to restrict the scope of each invention; they would give the inventor a clear idea of the range of protection.

The International Bureau would not only prove of great benefit and value to inventors and to the industry, it would also serve the men who are in the forefront of discovery, and who usually get nothing out of it: the scientists. From own experience I know that the scientist, working in the ill-equipped university laboratories, must go begging to the rich industries, which flourish by his discoveries. The scientist of today, who works for science sake, is helpless against the unscrupulous commercialisation of his discoveries. He would be happy to get only a small share in order to foster his work. But usually he gets nothing. He works in a university laboratory with small means, and with a small salary. His only reward in many cases is the printing of his paper in a scientific journal.

The International Bureau could better the lot of the scientist. He and the university which provided the means for his research would act as co-applicants. During the first 15 years after the publication of his discovery, any commercial use of it would automatically fall under the first pioneer patent. The royalty paid by industry would be put to the best use by the university: to foster new research and new discoveries.

Only an initial fee should be paid, which should be small. No yearly fees should be introduced for the upkeep of the patent (as it is now the case in all countries with the exception of the United States). Getting applications from all parts of the world, the Bureau would soon pay its own way. Moreover it could branch out and provide service for which many in industry and commerce would be extremely grateful.

This service - at present not provided by any patent office of any country - should consist in informing an applicant, whether a marketed product, or a product about to be marketed, infringe any existing patent right or not. Every executive in business and industry knows of today's hazards connected with the launching of a new product. Very seldomly is he sure whether he might or might not infringe a patent in some country. Researches in this direction are very expensive, unreliable, and bring no security whatsoever. All this affects greatly the price, the scope and the planning of the whole production.

If the International Bureau would provide such a research service (which would be easy for the Bureau), everyone could launch an application, asking for an examination of a product, whether it infringes some existing patent rights or not. The specialists knowing their special field and all the patents registered, would soon come to a decision. To be sure, the decision could be contested in a court set up by the Bureau, but such a re-examination and decision should be final.

Anyone familiar with the practical results of efficient patent laws in certain countries, will agree that it brings a boom of inventions about. If an inventor realizes that it is worth while inventing and applying for a patent, his creative powers will be greatly stimulated. More inventions, more discoveries, more international co-operation may have the most far reaching effects. Moreover the new international patent law would provide for the elimination of monopolies, which today are exerted through the great firms. With their great funds, they can master an overwhelming array of lawyers, experts, court actions, which cow into submission any small producer who simply has not the means for prolonged court actions. Anyone applying for a license on an existing patent, should be given the right of manufacture, provided he pays the patent owner the usual royalty.

The great firms would nevertheless support the whole scheme. Today 99% of all the money spent on patent applications, etc. are spent uselessly, and the executives know it. Millions of pounds and dollars are wasted and the consumer foots eventually the bill.

The staff of the Bureau would consist of technicians and scientists taken from all countries. To prevent national favouritism the application should be launched under a code number, the name of the applicant to be deposited in a sealed envelope with the Bureau. English and a second language should be used for verbal communication within the Bureau (just as in the Patent Office of Switzerland; two languages are official).

But the basis of such international co-operation would be the applications and the patent specifications written in semantography and understood in all languages.

Judging by the precedents, there is no doubt, that an International Patent Office will come about, sooner or later. The handicap at present is language. A symbol writing such as semantography could be of help.

L I F E A N D T H E I N D I V I D U A L

"To the primitive mind the structure of the human body, for example, belongs to the dull catalogue of common things. To the eye of the philosopher, the scientist, and the poet, the human body is fearfully and wonderfully made." "And a mouse" says Walt Whitman, "is miracle enough to stagger sextillions of infidels." So it is, if we have the wit to see it; and that we have the wit to see it, is itself a miracle more surprising than any prodigy recorded in the Bible."

"Life and Death he drew as circles
Life was white, but Death was darkened
Sun and Moon and Stars he painted..."

Thus it was that Hiawatha
In his wisdom taught the people
All the mysteries of painting
All the art of Picture-Writing."

Henry Wadsworth Longfellow

We have learned already the symbols for a male and female human being, and we shall repeat them herebelow, together with other symbols shown in previous chapters. New meanings can be derived by symbol combinations.



male



female



people
(at least two)



many-men
group, committee, company

The multiplication mark close to the symbol for man gives us the meaning of a multitude of persons gathered for some purpose, be it a crowd only, or a crew, or a group standing at a street corner, or a committee, or a company, either in business or at a social or other event, a club, a union, a society, there are many words in all languages, which indicate a gathering of people for some purpose.

Now, the semantographic symbol for people, folk, etc. is politely drawn to show also the "other" sex. However, in language we do usually forget our "better halves" and say bluntly Mankind, the history of Man, the progress of Man, etc. We shall agree to use the combined symbol for man and woman (as shown above in the symbol for people) whenever we want to express the meaning of Man in the higher sense as in The History of Man. We may use this combined symbol in connection with the multiplication mark to indicate a group, a club, a society, a committee, a company, which comprises men and women.

What happens when we put two multiplication marks before the symbol for man and woman? Apparently we get a new meaning, just as \sim means water, $X\sim$ lake, $XX\sim$ ocean. Putting two multiplication marks before the symbols for man and woman should give us apparently the meaning of a higher community - a nation. Now, some readers may object. During the last few decades the term nation has been put to much strain, and innumerable articles and books have been written and more speeches delivered about the question: what is a nation? As this term is of great importance, a special chapter

has been set aside to deal with this question and to evolve a proper symbol.

A man or a woman are no doubt chemical THINGS alive. We don't need to put the THING symbol indicator on top of the symbol. But what happens when we put the indicator for physical ACTION or for human EVALUATION on top of the symbols?



man



to man



manly (man-like)



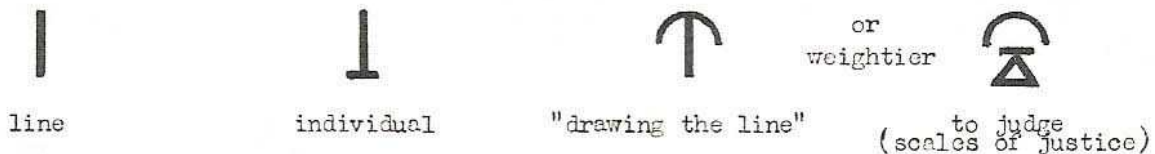
womanly

The verb to man has a clear meaning, as for instance in to man a ship, to man a gun. It means all the physical ACTIONS which can only be performed by man in handling a ship or a gun. However the human EVALUATION manly, or womanly leads us at once onto slippery ground. The terms indicate some abstractions we make in our minds as to the characteristics of a man or a woman. The term womanly is today used for all kinds of characteristics of a woman; good characteristics (as lovely, lovable, tender, etc.) and for bad characteristics (as fickle, weak, unpredictable, unreasonable, etc.). Good and bad are in themselves human EVALUATIONS. When G. B. Shaw speaks of womanly men and manly women he uses deliberately these words to evoke all kind of emotions and interpretations. Strangely enough, the term manly is today used only in the meaning of good characteristics of a man (as brave, strong, just, etc.), another proof of the Injustice of Man.



In the beginning chapters we have learned that the line of reference is a very important basic symbol element. We have used the line to indicate above, over, below, under, before, in front, behind, after, and many other meanings. In the chapter about The Relativity of Space (page 150) we have learned of the system of reference, to which every observation must be referred to, and in the chapter on The Relativity of Mind (p.180 and also p.205) we have learned that every individual is in himself a system of reference, and observes and judges everything from his own system. Every individual considers himself - subconsciously - as the centre of the universe (see quotation of Popper-Lynkeus on p.145). Any individual judges any event in the first place - how and if it affects HIM. He draws the line between HIM (first of anything and all) and the others (in the second place). He is Number One standing before anything else. The others stay behind, they are of secondary importance. If he reads about a railway disaster in the paper - if he or the people nearest to him are not affected by it, then he forgets it the moment he turns the page. This drawing of the line, expressing a geometrical operation, can be used in a geometrical writing.



We can even express the mental "drawing the line" by combining the line and the mind symbol. Now we may better understand the outline of the symbol for individual. It looks like a human being, but not with feet apart, but drawn together, as soldiers stand to attention. It looks even partly as the capital I which is used in the English language to express ^{one of} the most important items in the world "I", the individual. Now we see that the most significant feature in the symbol is the line, the line of reference, according to which the individual divides the world and its happenings.

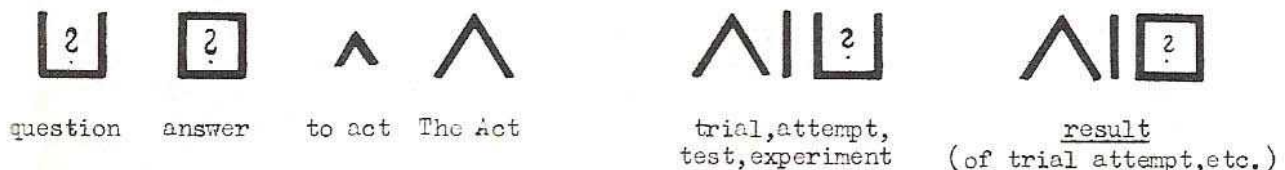


We have now two symbols at our disposal. We may reserve the weightier symbol showing the scales of justice, for the meaning of pronouncing judgement about an important affair. However, when we decide about unimportant matters, whether we like them or not, whether they are good or bad, only as far as the individual is concerned, then we shall use the symbol showing the mind and the line.

The symbol for man, shows a biped standing with both feet apart , so stands woman  in our symbol, with the closing horizontal line of a skirt. In the symbol for the individual both stand with legs close together. The symbol for the individual is valid for both sexes and so are all the related meanings.

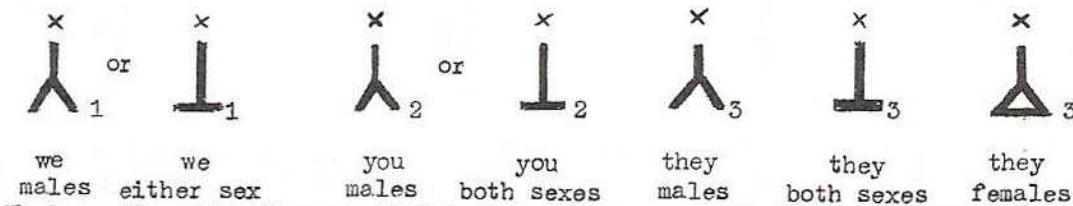
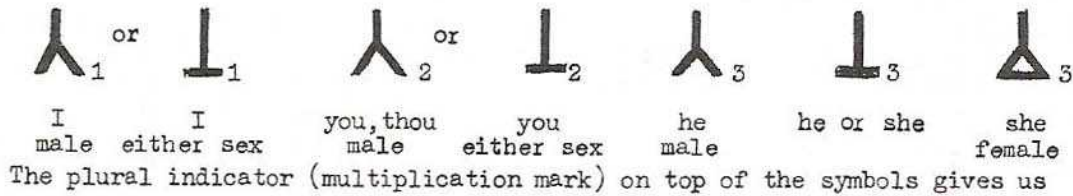


Herebelow is another example, showing the use of the line. If we perform an ACTION, the result of which is not known to us, we term such ACTION to try, attempt, test, experiment, etc. The line divides the ACTION from the result, which is an open question when we start our trial, attempt, test, experiment.



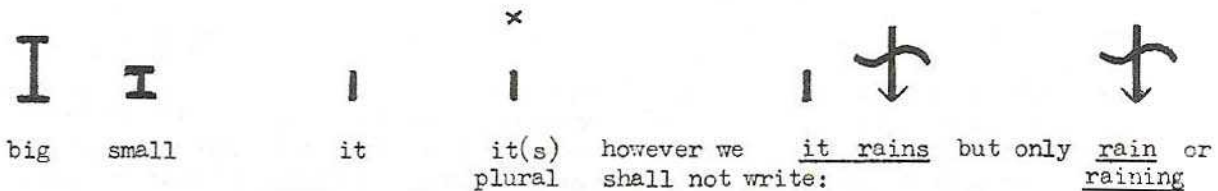
(274) Having developed the symbol for the individual, we shall now tackle the problem of the pronoun: I, you, he, she, it, we, you, they.

We should not have difficulty in using the numbers. If I is Number One, then you means the other, the second (2) fellow, and he is usually considered as the third (3) party. The symbol for man or woman, together with the numbers 1 2 or 3 should give us the symbols for the pronouns I, you, he or she. The plural we you they can then be indicated by the plural multiplication mark.



We have thus also the possibility to express a multitude of females: they. For both sexes, we use the individual symbol, or if we want to be polite and more to the point, we may put the symbol for male and female close together as in the symbol for people at the beginning of this chapter. The individual symbol (see foregoing page) is best.

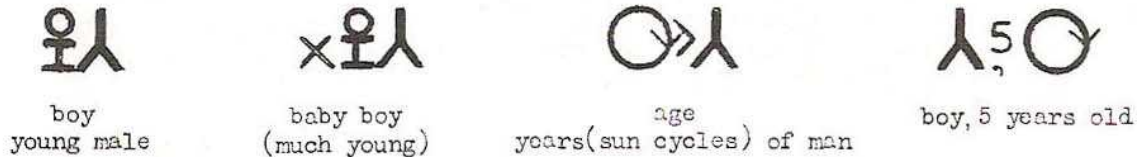
The grammar minded reader will miss the third person neutral singular pronoun: it. It refers usually to inanimated things and to animals, babies and children, if we want to avoid stating the sex. We can derive the symbol for it easily from the symbol for small. However we shall not use it as freely as in ordinary language.



Dealing with the pronouns for babies and children we may tackle the problem of how to express young and old without offending anybody. Some people are still "young" at sixty. The symbol for flower will help us.



Somehow, the symbol for young looks like a little child, the circle being the head, the small outstretched arms, the feet. As it is, it can stand also for the meaning of child. The sex indication could come afterwards. Much young would mean a baby. Opposite meaning of young would be old, but we have a better symbol, indicating grown-up. However, all these words are EVALUATION words. Stating the age in years (cycles of the sun) is better and more to the point. (Would women evaluate this method "better"?)

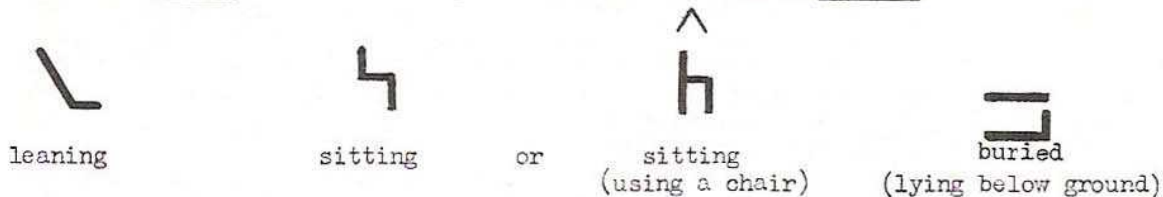


How should we express standing and lying? We could use the symbol for vertical and horizontal in connection with the symbol for man, but we may draw up an auxiliary symbol.



Now, the last two symbols look like the outline of a man standing or lying on the ground. The small stroke indicates his feet. Well, we may think that this is the outline of a person standing or lying. However, the symbols can be used in general for anything standing or lying. The symbols refer to some THING which is longer in one direction than in the other (indicated by the long and the short stroke). A wardrobe, for instance, stands usually. But it might be laid down on the ground (for instance to be repaired). In both cases the above symbols can be used. They are in fact auxiliary symbols, meaning vertical and horizontal. They are convenient, but we could dispense with them and use only the geometrical meanings (shown above on the left). In all cases, the context, the word order in the sentence will tell what is meant.

Applying the above outline for other positions of the human body we could form the symbol for leaning, for sitting, or for lying below ground, which means buried. The symbol for sitting might be confused with the symbol for staircase. We use a tool to sit down: a chair, and the ACTION performed with a chair is sitting.



Somebody may object: leaning or sitting, standing or lying is no ACTION. However, primitive man felt instinctively that he had to use verbs for these meanings. Standing, leaning, sitting, lying means ACTION for a living creature, an ACTION invisible outwards, but going on within the body. The physiologist will tell us that the organs of the body are performing as usual, or under strain, caused by such positions. To stand for three hours on one leg, or even on both legs - just try it and see how much ACTION it involves.

However, for inanimated things - the house stands, the stone lies on the ground - these verbs seem to be used in some sort of metaphorical expression. Yet, the engineer and the geologist will tell you that ACTION is involved even with inanimated THINGS. The geologist measures the raised temperature, produced by rocks, pressing onto the underlying ground. The engineer measures the strain produced in materials placed in certain positions. The electrons of a wardrobe may act differently in their mad dance, when the wardrobe stands, or lies on the ground, at least those, which bear the greatest weight.

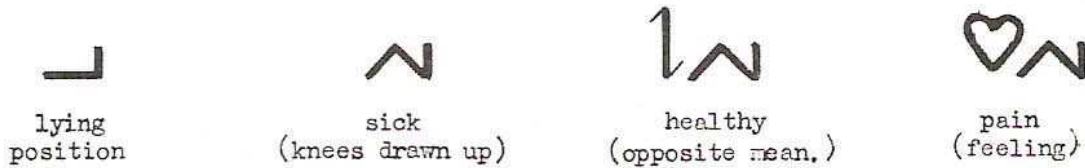
In any case, these speculations may indicate, that Man, the inventor of language, may have had some hunch about intermolecular action when he put these meanings into verbs.

Going back to the human being, we may use the above outlines to indicate strong and weak, healthy and sick. A weak person does not stand erect. The knees give way, and are bent.



HEALTHY AND SICK, STRONG AND WEAK, NEEDED AND HELPFUL

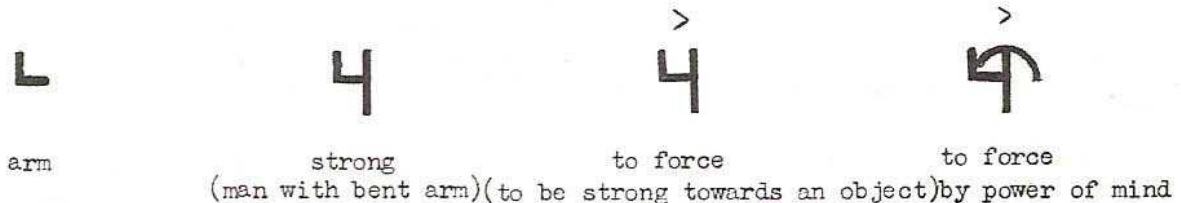
To be not weak, does not necessarily mean strong, but it does mean a condition of bodily health, even for a delicate, fragile person. The symbol for strong shall be evolved later on. Herebelow we shall outline a person lying in bed, writhing in pain and sickness. A sick person very often draws up the knees. The legs form an angle.



Some readers may think that a better symbol for healthy should be evolved, not one which gives a negative, opposite meaning and needs the opposite symbol. However, the symbol as it stands may prove its worth. We human beings never think that we are healthy (thank God) as long as we are healthy. We accept this state of affairs quite naturally, without giving it a thought. Only when we find ourselves in hospital, writhing with pain, knees drawn up high, only then do we realise what a wonderful thing it is to be healthy.

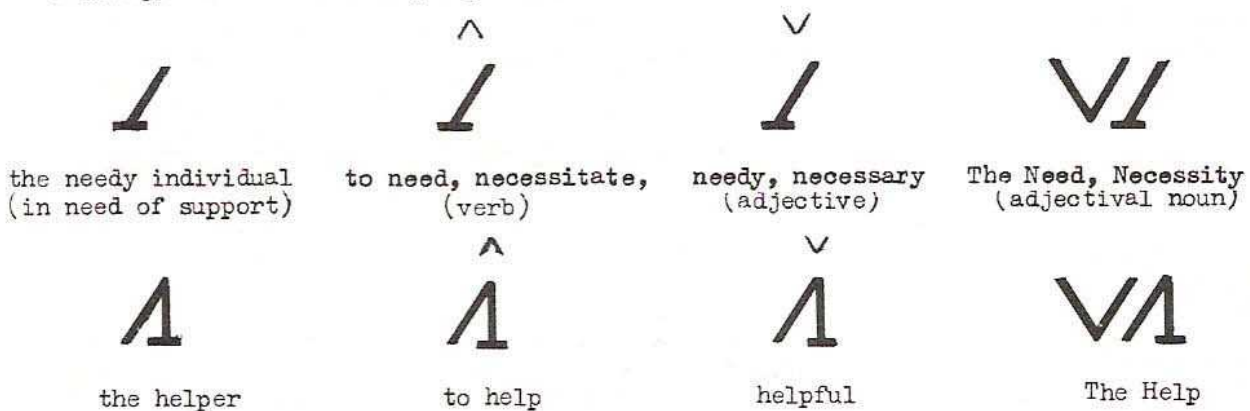
Well, the symbol should remind us, that healthy means not being sick thank God.

Now to the symbol for strength. The old Egyptians have given us the outline of an arm bent at right angle, as wrestlers and strong men do, to show their biceps.



From the notions of weakness and sickness we can advance to the notion of help. The meaning of help in our present day world is a wide one. A man may be strong physically, but he may need help of some kind, advice, finance or the like. Healthy people are often in need of spiritual guidance. So we see that the notion of help is variably bound up with the notion of need. There is the "needer". (the individual who needs help) and there is the helper (the individual who helps the needy individual.) How can we translate these meanings into geometrical lines?

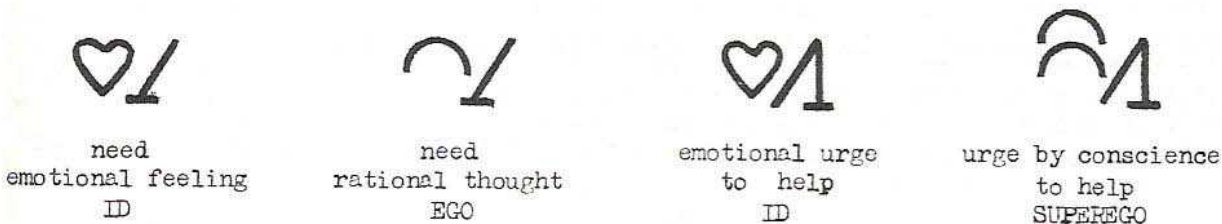
Actually it is simple, because every day language has already translated these meanings into the language of the geometrist. A needy person is one, who needs support. He is actually leaning on the helper (for this support), who prevents the "needer" from falling. This can be easily depicted.



The symbol depicts an individual, being the support for a leaning line, which widens the meaning of help beyond helping individuals. It means: giving help to anything in need of support, be it an animal, a house, a "good cause", science, friendship, peace, anything.

However, who makes the decision of the need of help? Some individuals think they need help and they go begging for it, whereas other individuals (in dire need of help) are too proud to confess even to themselves that they need help. On the other hand, some individuals think that many persons, crying for help, don't need it at all. It's an EVALUATION.

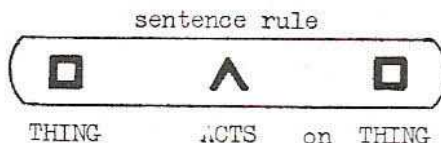
We guess already that the word need is a human EVALUATION word. All the words of the needy person, to need, etc. stem from the original adjective need, needy. It is not necessary to put the mind symbol over the symbol for need; not only do we realize that the meaning is originally a human EVALUATION - the symbol itself, shows the line of reference, which indicates the individual. Every individual is his own and unique system of reference, and there are not two individuals alike. Moreover, every reference to geometrical meanings can only be relative, as we learned already in the chapter The Relativity of Space. If an individual considers his position leaning, in danger of collapsing, he makes this EVALUATION with reference to his own system of reference. He himself "draws the line". However, we are free to add the mind symbols if we want to.



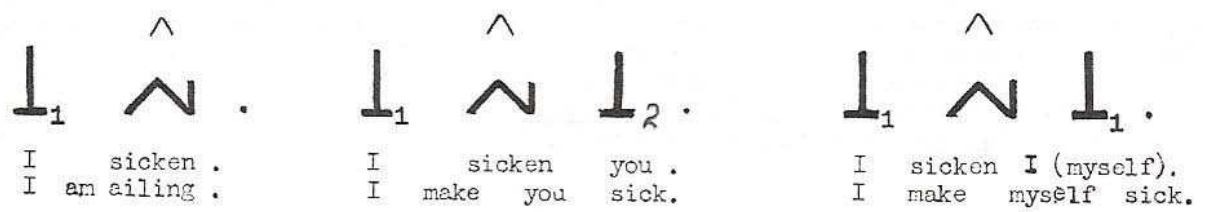
Now, we have learned a number of verbs to stand, to lie, to sit, to ail (to be sick) to need. We assume the attitude of the physiologist and agree that these verbs refer to real physical ACTIONS although no outward move is visible. Another verb in this group is for instance to hang. Hanging on a bar in the gymnasium (completely motionless) seems to be no ACTION at all, at least no visible ACTION. But we know from own experience that to hang is a very strenuous ACTION.

On the other hand, to hang an overcoat refers to a visible ACTION. Later on the overcoat hangs, which is no visible ACTION, but it takes a strain on the material. Similarly if I am going to hang myself on a bar in the gymnasium, it means a visible ACTION. However: I am ailing refers to an invisible ACTION. Here we use the verb to ail. But we can dispense with an ACTION word and use an adjective: I am sick. We can turn this adjective into a verb to sicken. I sicken myself, or I sicken you, which means (in an adjectival form) I make myself sick, or I make you sick.

All these grammatical difficulties resolve themselves into a simple rule in semantography. The grammarian will tell you, that the differences mentioned above arise by treating a verb transitive or intransitive. If I hang the overcoat, I transfer the ACTION of hanging to an object, the overcoat. The verb to hang is transitive. However, if I hang motionless, the verb to hang is intransitive. If I go through the motion of hanging myself on the bar, it's transitive. In semantography we can readily forget the difference, just as simple people are not hindered in their talk, although they never heard about it. Let us be reminded of the simple rule for a sentence, the natural order:



If our sentence consists of two symbols only like Man acts it may refer to an intransitive situation, like

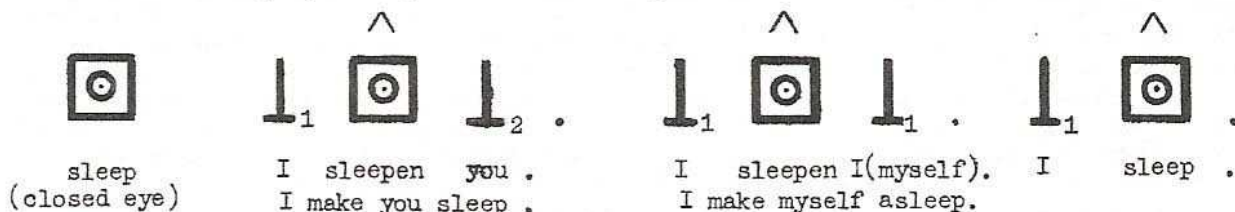


Herebelow it is shown how the rule works with inanimated things, a hook and a wheel.

hook, hanger	to hang	man hangs wheel .	Wheel hangs .

SIMPLE SYMBOLS FOR TRANSITIVE AND INTRANSITIVE ACTIONS

One more example, showing the starting of an ACTION and its continuation.



Sleepen may seem strange in English, but other languages have this form. In French dormir means to sleep, and endormir means sleepen, making fall asleep.

Now, if we want to express that an effort has been made to bring a certain activity about, we can use the verb to make. We have used it as a second version in the above examples. In a later chapter we shall learn the full meaning of the geometrical symbol to make. Here below it is seen how we can put it to work in similar expressions, to the ones mentioned above.



Instead of writing the symbol for I twice, we could use the symbol for self indicating I myself (see page 273)

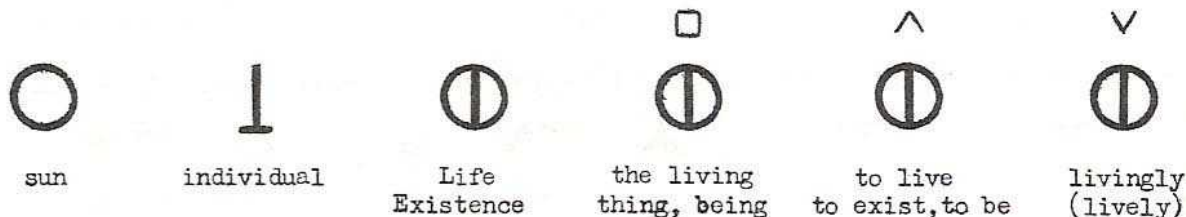
We see already that most verbs which are transitive and intransitive, refer to activities of human beings, which are either natural functions of the human organs, coming about by themselves, or brought about by an effort either on oneself or on other persons or things. In other words, most of those verbs refer to living things, and this should remind us of the necessity to evolve a symbol for the meaning of Life.


In one of the latest chapters, dealing with the symbol for Creation, you will find quotations on the meaning of Life (see also the quotation at the beginning of this chapter). In pondering about the meaning of Life we are confronted with the greatest miracle in our universe. We see the amazing activity of our own body, in which every cell seems to know exactly what to do to keep the great community of cells going. If some cells are hurt or destroyed, other cells will come to the rescue, will split themselves to produce new cells or will even sacrifice themselves in the destruction of the invading enemy. But the greatest miracle is the creation of new life out of the union of two creatures.








The astronomer who watches the nebulae as they draw together to form stars, the chemist who watches the chaos of molten masses, out of which crystals of geometrical beauty grow, they realise the ultimate purpose reigning in this universe: the creation of order out of disorder.

However, the biologist, who studies the development in living matter, the creation of a complex creature out of one single cell, realises the higher purpose reigning in this universe: the creation of order out of order, a drive from lower order to higher order.








We will not try to make a mysterious symbol for this greatest of all mysteries. We will give it a simple meaning, understood by simple people. The individuals, that means You and I and all the other creatures of this earth, which includes the animals, birds, fish, insects, plants, down to the single cell amoeba, we all live on this planet, by the energy, which is coming daily to us from our sun. The sun gives us warmth, gives us food and energy. Without the sun all the individuals would cease to exist. The symbols for sun and individual combined, should give us the meaning of Life.



When we combine the symbol for life with the symbol for a wave  (this symbol indicates water generally) we arrive at a meaning, expressing the incessant change going on. The combination gives us the meaning of change and its derivations and synonyms.







						
change alteration mutation modulation variation permutation etc.	changer alterator mutator modulator variator permutator etc.	to change to alterate to mutate to modulate to vary to permutate etc.	the THING changing, al- ternating, mu- tating, modu- lating, vary- ing, permuta- ting, etc.	changingly, -ly	changeable -able	changed -ed
add the synonyms according to any book on synonyms.						

The symbol above reminds us of another symbol, very similar in outline and meaning.











						
sun	rain	weather	forward	development	backward	recession

The changing weather is for us an indication, that ceaseless change is going on, even in inanimated matter.






The changes in the life of an individual lead ultimately to death. Afterwards his remains take part, sooner or later, in the development which goes on in matter. But to the individual himself, death is a sudden blotting out of life. His name, his existence is crossed out. We can use the oblique line, (with which we cross out a written paragraph) to cross out the symbol for life.

					
to cross out	life	death	to die	mortal	dead

We can use now the simple word order to indicate the intransitive and transitive verb.

		.				.			.			or	
man	dies	.	man	kills	bird	.	a killer	a dead man		dead man			

In a previous chapter, we have seen a symbol very similar to that indicating life.
(p. 241)

				
life	bowl	full	mind, thought	satisfaction, contentment

In combining the symbol for life and contentment we get a new symbol:



It indicates contentment in life, the contemplation of a full life, satisfaction; it shows the sun and the sum total (+) we receive of life and energy, and it has an even higher significance for the Christian peoples of the world.


THE SYMBOLS FOR THE FAMILY OF MAN

"This is the book of the generations of Adam. In the day that God created man, in the likeness of God made he him;
Male and female created he them; and blessed them, and called their name Adam, in the day when they were created.
And Adam called his wife's name Eve; because she was the mother of all living."

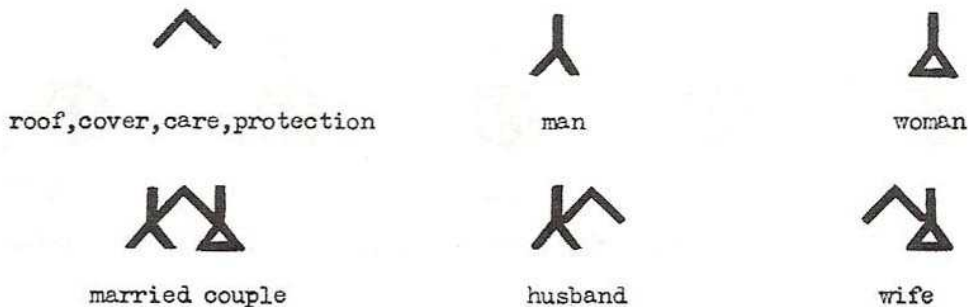
Genesis, 4.1, 2; 3.20

One of the trickiest puzzles of my boyhood, were the "relative relations" of my relatives. Even today it takes me some minutes to figure out who is a cousin of the second degree to whom.

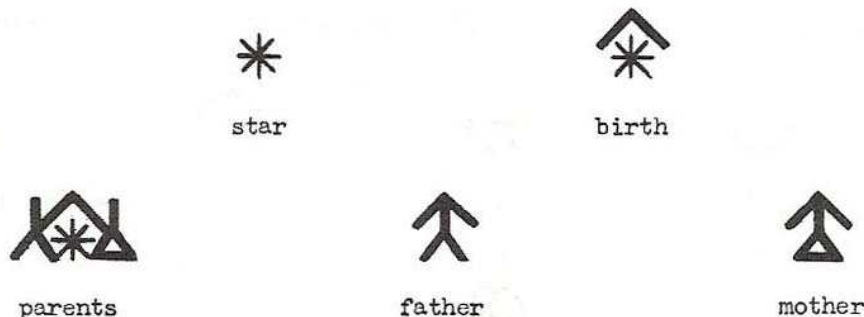
When I started to evolve the symbols for our family relations I decided to make symbols clear enough to show who is who. At present, the words used are not clear and are even ambiguous. Take the word Grandfather or Grandmother, which grandfather, which grandmother? There are always two of them, two grandfathers and two grandmothers for each individual. Granduncle is even more ambiguous. I never could make it out, and I decided to end the torments of all boys and girls by making clear symbols.

Looking around for a good symbol indicating family, we find the Chinese symbol . It indicates a roof and below the roof - believe or not - a pig. But this has its significance. A family under a roof may starve. Most precious possession of a family is a domesticated animal, which, in the poor areas lives with the family under the same roof. And among all the domesticated animals, the pig is that which gives the finest meat, or at least the one, which the small farmer ever longs for. Roasted pork is a rarity with the poor farmer. If he has it under his roof, then all is well with his family.

We can use the roof symbol too. In fact, it is the symbol for the family in the whole animal kingdom. First thing mated animals do, is to make their roof, their nest, their den. And even in our complicated society, a husband and a father is the man who can support a roof, a cover, to give protection for himself and his beloved ones.



A married couple are not yet parents. To be parents a child must join them, be it their own or an adopted one. Newspapers use already an international symbol to announce a birth: a star. A star shining under the roof of the hut is of beautiful significance.



The words above are used also in the case of an adopted child. So are the symbols to be used.

Let us now see whether a son or a daughter is born under the roof. We can use the different lines in the symbols for man and woman, to indicate male and female. The symbols as they stand indicate by their smallness the little ones. Moreover the lines have deeper significance, as we shall learn later on.

A brother and a ~~daughter~~ ^{daughter} indicate in any case a second child. The number 2 and the symbol for male or female will indicate these meanings.



son



daughter



brother



sister

But we have been a bit rash. We have not yet evolved the symbols for engagement, wedding, marriage, bridegroom, bride, etc. Looking around for some international symbols already used, we find on the wedding announcements some: the heart pierced by an arrow \heartsuit (which indicates love in semantography too, in honour of the early cave man lover, who invented it (see p. 171)) We find furthermore on the cards two kissing doves and two rings interlocked. It would be a bit difficult to depict two doves, but two interlocked rings are easy.



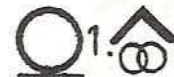
marriage
(two rings)



before after



engagement
(before m.)



wedding
first day (sun/earth)

A cynic may say that the two rings look like two links of a chain and this implicates certain meanings. In fact, it does. A marriage is a union, strongly interlocked for the sake of the children, who need a roof, care and protection, which only father and mother can give. In semantography, the two interlocked rings have a wide meaning.



connection, junction
joint, union, combination
coalition, alliance, etc.



to connect, join,
unite, combine,
etc. etc.



joining tool
(in general)



chain
^ to chain

Although the two rings, or the four, can be easily typed on our typewriter, it should be understood that this geometrical representation of two rings is only an auxiliary symbol. We use it, because it is convenient, but we don't need it. We have seen on page 151 that we can demonstrate the above meanings with the line and the mathematical plus. These are basic symbol elements.



connection, junction
(line plus line) together



to connect, join
to unite, etc.



joining tool
(in general)



chain
many rings (geometrical)

Let us go back to our wedlock symbols. Before the wedlock we have the engagement. A bridegroom is a man before being a husband, and a fiancée is a man before, before...



husband



bridegroom
(before husband)



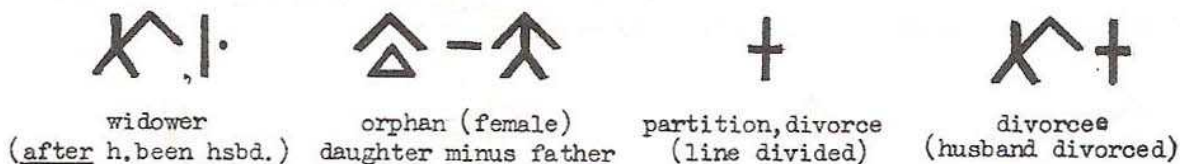
fiancée
(before-before h.)



lover
this he is supposed to
be all the time.

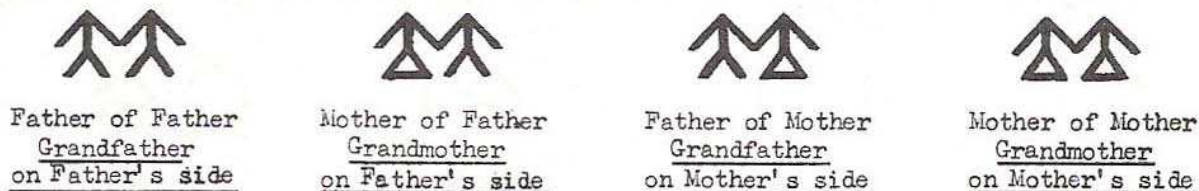
SIMPLE SYMBOLS FOR THE MANY RELATIONS IN THE FAMILY

Every matrimonial union unites the two persons for life "till death do us part". We shall therefore use the symbol indicating after, for a widower and a widow. If however the couple decide to part than we shall use the part symbol



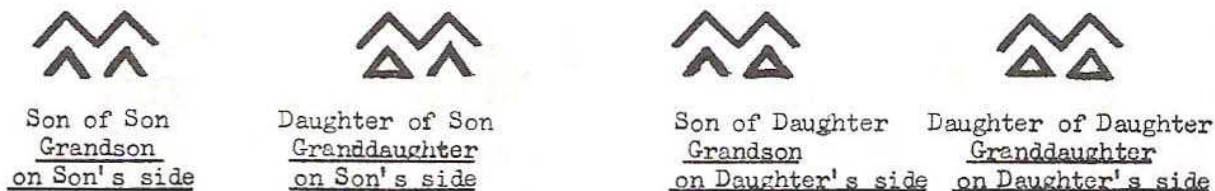
We shall now evolve the symbols for the grandparents. Here we must bear in mind, that we have to join two families. If we join the roofs, this will be a clear indication of their direct connection and succession.

As said in the beginning of this chapter, the term Grandfather refers to two different persons: its either Father's Father or Mother's Father. These two word combinations can be made visible in geometrical lines.



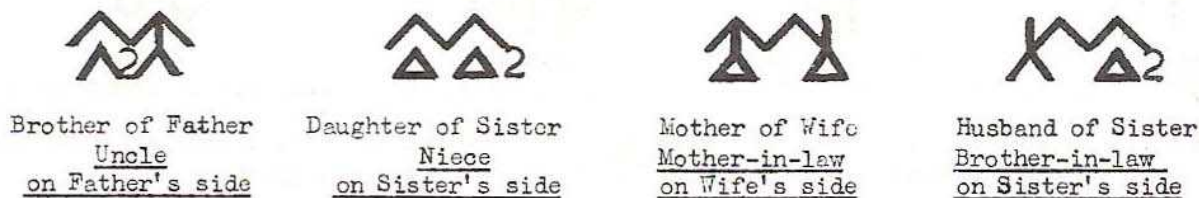
To our surprise, the outline of the adjoining roofs disappears in the above symbols, and we see instead, men and women holding each other with their hands and forming an unbroken chain of generations.

In the same way, we can now depict other relationships in "adjoining" families.

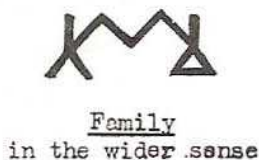


It can easily be proved that the above symbols are not more difficult to type than the word G-r-a-n-d-d-a-u-g-h-t-e-r for instance. On the contrary. With the adjusted typewriter (carrying only one set of lines) it needs 9 typings. With the special typewriter (carrying two set of lines; see page 97) only 4 typings are necessary, whereas the word Granddaughter, having 13 letters, needs 13 typings. But this is not sufficient. To equal the exactness of the typed symbol we would have to type 24 letters: Granddaughter on son's side.

A few examples of the symbols for other relatives are given below.



Now we can form the symbols for some general terms, related to the generations of families.



The symbol of the adjoining roofs gives us

(283)



relation
genealogical

to be related

male relative

female relative

We shall not be surprised to see in a later chapter the mathematical symbol \rangle used in a similar way, to indicate a relationship. In this chapter we dealt with the relationship between the generations. The mathematical symbol for relation \rangle used horizontally, gives us the outline of a roof. Adjoining roofs symbolizes more than anything else the close relationship within a family.

The ACTION indicator shown above should not irritate us. To be related to somebody by family ties, means the manifold action of living in a certain set of relations. It affects all our actions.

What meaning can we derive by placing the ACTION and EVALUATION indicator on top of the symbols for our relatives?



Father

Mother

to father

to mother

fatherly

motherly

We know too well all the actions and all the characteristics of a father and a mother. Sometimes we attribute them to some other person who fathers or mothers us, when our father and mother are not more with us. Those other persons which we evaluate fatherly or motherly try to be like father or like mother (mother-like, motherly)

To father means to care for us, as our father did, to teach us, to advise us, to guide us and if necessary to admonish us.

To mother means to love us, as only a mother can do, to sit at our bedside when we are ill, to help us over all our troubles, to understand us, whatever we may do and even to forgive us a thousand times, when we go away to distant countries and leave her alone and forgotten. But we ^{do} never forget her and father.

Wherever we are, as long as our father and mother lives, we know that there is somewhere a roof to which we can gladly return, and often when we are worried, we hurry back like terrified chicks. The symbol may indicate the roof, but the outline looks much more like the outstretched arms of father and mother, always ready to receive us and to embrace us.

SUBTITLES IN THE JUNGLE CINEMA

"No other medium has such power to lift people completely out of themselves. Only the motion-picture camera can look so closely into the face of a man that it can record the unsaid things that come into his eyes. Movies can be used either as an ether cone to drug us into stupid oblivion, or as adrenalin to stimulate new vitality, broaden our knowledge, deepen our understanding...

Eventually the screen may begin to prove consistently what it now indicates spasmodically: that it is the most entertaining, the most satisfying and compelling of all art forms."

Budd Schulberg (76)

Since my boyhood I have been a fervent amateur photographer and a fervent cinema ~~poet~~. Later on I bought a movie camera and won so much praise in Film-Amateur journals that I went professional during my years in China. I am still movie-crazy and I can walk 10 miles to see an old film in a village cinema or I can see a film four times within 10 days and wax wildly enthusiastic about some feature of it. The outbreak of the second world war disrupted the making of a film, which I hope to finish one day. Strangely, it is composed on the music of Schubert's Unfinished Symphony, following bar by bar the moods of joy and despair, contained in that heavenly music. It is the story of a girl - and there is no talking in that film. Only to see and to listen to that international language - music.

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I mention all this only, to indicate, that I speak with some measure of competency,

I believe that the innovation of pictures which talk, has increased the difficulties of the film as a world-wide international medium. A film in which English is spoken has a wide range, but it is incomprehensible in countries where English is not understood. Synchronisations are costly and not economical for small countries. The motion picture producers were forced to insert sub-titles and very many of them, because, in present day films there is a lot of talking; it may be said: too much talking. The result is boredom.

I have seen films in many countries. In Roumania for instance subtitles are made in 4 languages (Roumanian, German, Ukrainian, Hungarian) These 4 lines of subtitles cover almost the whole screen. You see only the foreheads of the ^{actors} players (in a close-up) or the sky, (in a long shot) emerging above the lines. It's very annoying.

In China, there is a smaller screen on one side of the main screen, onto which long explanations are screened (in Chinese) of what is going on in the film. This too, is very annoying, because the onlooker is distracted. To avoid this, five of the biggest cinemas in Shanghai have installed an earphone service on every seat. You pay an additional fee, get a pair of earphones, which are plugged in, in front of your seat and then you hear a Chinese girl explaining what it is all about. This is an expensive method, your ear aches, you don't hear the accompanying music, etc. etc. Besides small cinemas can't afford it.

Subtitles are out of the question in regions where the population is illiterate. For them the old silent film provided more entertainment. Now nothing "happens" on the screen for many minutes, except incomprehensible chattering.

There is another aspect. I went to cinemas in the Chinese suburbs of Shanghai. They showed many films with English talk. But the copy was already so old, and the talking and projecting machine so defect, that the English talk was for the most part unintelligible even for an English speaking onlooker. Even he had difficulty in making out what is actually going on. This happens in most of the millions of backward village cinemas.

As said before, a film in one language version has a limited range today. This makes film producing more costly, because of lesser returns. Hollywood tries now to develop new markets for their films. They copy their features on 16 mm to make it projectable with small portable 16 mm projectors even in the smallest villages of Europe, Africa and Asia.

But the language difficulty remains. Subtitles are out of the question, not only on account of the illiteracy of the population, but because of the diversity of dialects.

This long introduction leads to the possibility of using symbols. The main counter argument would, of course, be, that those illiterate people can't read - even the symbols.

However there are the following considerations.

It is not necessary to give an account of any conversation which goes on, on the screen. Everyone, who ever had to explain the happenings on the screen to an old relative or someone who didn't understand the language, knows that only a few words are necessary to give the necessary information. He may whisper: "This is a father and his son. Father took a second wife. Son falls in love with her". These few words are often sufficient to understand perfectly all the happenings, even without understanding a word the characters say.

Semantography could be used just for this purpose. Only a few words here and there, very simple in meaning, understandable to any native. Some of the boys may learn semantography in school, or in their boy scout group. They would be proud to tell their father the meaning of the subtitle. Others may be induced to learn the symbols in order to understand the film. In the end, Hollywood may be interested to insert some funny cartoons, in which man and woman, houses and trees, lovers and fighters may be depicted. Then - as it happened in the oldest drawing films, the outline of the figures would start changing, until the symbol would stand on the screen in clear lines. Hollywood could also distribute nice leaflets.

This is the great difference between an alphabetical writing and semantography, which shows the outline of things and is almost self-explanatory.

In any case, this is a suggestion, which one day may come true. Hollywood is very sensitive, but also very sensible about the box office report. Here is a medium for subtitles understandable in all languages. And don't forget. Difficulties in understanding a talkie do not arise only in Asia and Africa. They exist also in the "literate" countries of Europe, America and Australia. Quite often we would be grateful for a short subtitle, even in English, to grasp the situation, because there is so much talk, and quite often, we don't understand every word.

On the next page, some examples of such subtitles are given. Some new symbols will be shown too, as for instance the symbols for crime, criminal, punishment, etc. etc. It should be understood that we are all aware of the sort of gangster films made by Hollywood. On the other hand, even the finest films show great human tragedies and conflicts. Even in commendable films people are killed, and others end in prison. Think of the many murders in some plays of Shakespeare, villains, crooks and murderers which fill the stage.

SUBTITLES IN FILMS

understood in any language and dialect

As said before, these sub-titles are not designed to follow any dialogue. This is not necessary. If an illiterate audience knows what the quarrel is about, it is not essential for them to understand every word. The subtitles shown below should be inserted sparingly at important moments. The boy scout, the girl or the adult who can read the symbols, can whisper the meaning to his folks sitting next to him (just as it is done nowadays).

Father and Son

Father married second Wife

Son loves her

Father goes to forest

He returns before time

gun goes off by itself; kills son

Wife says: I did not love him

Father says: I don't believe it

In (the) Court

Father says: I speak the truth. You must believe it. I did not want to kill.

Jury's verdict: Guilty!

Judge's sentence: 15 years imprisonment

Neighbour saw the killing but he kept it secret

He desires her

And so we may go on and provide subtitles in international symbols for any film. A glance on the examples given on the foregoing page proves that the symbols are simple; that the same symbols and their elements occur again and again, and that people should not have much difficulty in learning to read them. Remember the chapter Reading, Writing, Speaking on page 58 in which it has been pointed out, that Reading is the simplest of these activities. Many millions of "literate" people in all countries are unable to write a correct letter; but they can read the newspaper or a novel.

In a later chapter it will be shown, that semantography could be used for sub-captions beneath pictures in international illustrated papers and magazines. Anybody could then understand and read the captions, the Bulgarian, as well as the Spaniard, the Finn as well as the Chinese, and all the others.

Someone may laugh about the symbol for gun, which looks like a canon on wheels. But the symbol is actually a compound symbol.



to cross out
to destroy,

tool

THING which
destroys

"destroyer"
(any warship)
(see "war" symb.)

the line
plus a handle

knife, sword

You see that the symbol for sword, knife, cutter is not only the outline of a sword. It contains the symbol for destruction too.

Instead of a handle, add the symbol for mechanism, a wheel, to the line and you get the outline of a gun, a mechanical means of destruction. Add the symbol for big and small and you get the meaning of a big or small gun. Add the symbol for machine and you get a machine gun of any caliber.



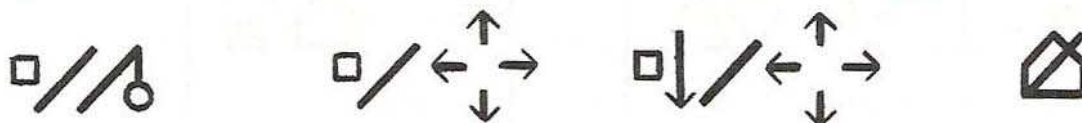
gun
a rifle

gun small
pistol, revolver

gun big
canon

gun machine
of any kind

Using the symbols for small and big with the symbol for knife, we arrive at a dagger, a sabre, lance, and the like. Continuing to use the symbol for destruction we can form



destroyer
chemical
(outline of retort)

explosive
(destroyer by
desintegration)

aerial bomb
(falling down
explosive)

ruin
house
destroyed

Please note, that even the symbol for chemical, the outline of a retort, shows the line for destruction, extinguishing, etc. This is what actually takes place in a chemical retort: the destruction of chemical compounds out of which new compounds are build. You can destroy a house and you get a ruin, and you can destroy a ruin and build up a house from the fragments.

The crossed swords have been used for many centuries as the symbol for military and everything connected with war and fight. We shall use this symbol too. In a later paragraph we shall learn the symbol which indicates a general term. Thus we could get the meaning of any fight in general.



fight
military

fighter, soldier
a military man

opposite
meaning

what is this?
a civilian or a pacifist ?

Actually, the symbol represents a non-fighter, a civilian. To be a pacifist, means a distinct state of mind. There are many soldiers who are pacifists at heart. We can use the heart symbol, which is actually a mind (ID) symbol, or we can use the mind symbol for rational thought and reason (EGO).



a militant spirit



a pacifist spirit



peace
in world affairs



peace of soul
(betw. heaven & earth)
(see p.174)

We can develop other symbols in this martial field.



group
of men



large group
(army)



a division
(16,000 men)



state
(flag on earth)



war
between states

Our good old arrow (one of the first weapons) shall help us again to various meanings.



advance



retreat



break through



attack, offensive



defence (-sive)



victory
(gain, plus)



defeat
(loss, minus)



captive, prisoner
of any kind



prisoner of war

We should not be surprised to learn that the symbol for captive is a complete copy of the Chinese character for captive. Moreover, it outlines very clearly the captivity of a man within an enclosure, a picture depicting the real things and therefore self-explanatory.

With the symbol for prisoner ^{we are} where we started: subtitles for films. The father, as you remember received a sentence of fifteen years. Obviously there is a difference between a prisoner of war and a man imprisoned as a punishment. To express the meaning of imprisonment we can use the outline of a barred window.



imprisonment
acc. to criminal law
(prison window)



prison
penitentiary



a man having been
jailed) past symb.



a man who shall go
to prison, sooner or
later.

The last symbol should be used for criminal. It refers to a man, whose future is the prison, because he has committed a crime. We shall agree that these symbols should refer to the criminal law, which is more or less similar in all countries. It should not refer to political "delicts". But to imprison or murder a man because of politics is a crime.

All this is a very controversial subject. What "is" a crime? A breaking of the law? What "is" law? A set of rules laid down in books, referring to judgements of the mind. The reader is kindly asked to peruse foregoing chapters, especially on p.234. and later ones.

The symbols for political "crime" will be evolved in a later chapter. The outline is simple. We know already the symbol for governing - leading the state (see p.176) This symbol stands also for politics. A political "crime" can be depicted as a "difference of opinion about the governing of the state, condemned as wrong by a mind".

Special reference is made of the chapter "The Units of Ethics" in the third book.

A person jailed for a political delict is to be symbolized by the symbol for captive (a man within an enclosure). The compound symbol for political differences (see foregoing paragraph) may be added. The barred window as shown before should be reserved for offences against the criminal law. In particular, the name of the state may be added, also the year, to indicate the criminal law of that particular state in that particular year.

But, of course, we may never need to go into that, although the language of the law books in all countries is in dire need of simplified and clear expressions.

We are concerned in this chapter with the comparative simple meanings, indicated by the previously shown symbols. In a foregoing chapter we have also outlined the symbol for a killer. We may depict a murderer as a man whose future is the gallow, just as we depicted a criminal. The outline of a gallow is simple. However, we know that murderers are not deterred by anything. Such symbols will not cause any wholesome semantic reaction.

To end this chapter, a few more examples are given to show that any meaning in this field can be depicted.



trap

secret
(mouth enclosed)symbol for
betrayal, giving awayescape
(captive break through)

A N A R C H Y I N L A N G U A G E

"The most capricious words in a language like our own are particles, especially those classified as directives (e.g. to, with, for) and the link-words or conjunctions (e.g. and, because, though). The difficulties which arise when using particles are of three kinds. One is that in any language particles are specially liable to idiomatic use. A second is that the meaning of a single particle in any one language may embrace the more restricted meaning of two or more particles in a second. The third is that when two particles with the same meaning are assigned to different situations, we need to know whether a foreign equivalent given in the dictionary is appropriate to the context, before we can translate them."

Frederick Bodmer and Lancelot Hogben (5)

The above citation is from a new and very important book "The Loom of Language" by Frederick Bodmer, edited and arranged by Lancelot Hogben (George Allen & Unwin, London). You will find other citations from this standard work in various parts of this book. The reader, interested in language and language development, is strongly advised to read this book.

The chapter, dealing with the particles, is titled by Bodmer and Hogben "The Anarchy of Words". I have used a similar title for this chapter, in order to emphasize the importance of it.

Bodmer and Hogben made a survey to find out how many particles are used on a page, compared with the number of nouns, verbs, adjectives, adverbs and pronouns. The result is amazing. Ordinary speech and writing contain about 30% particles. In other words: almost a third of all words which you find on a printed page are particles. This result is commonly unknown, and it tends to show the importance of the particles. A student of language who has memorized 1000 vocables, including particles, learns to his amazement, that these particles are used in different ways. The same particle assumes different meanings, or different particles are used for the same meaning. He finds the words man, house, horse, to eat, to run, to see simple to understand. Then he believes that the particles in, out, on, at, with, by, to, for of, about are also simple in meaning.

But this is not the case. On the contrary - anarchy is the right word. And this means anarchy in our own mother tongue, and anarchy in any other mother tongue. But both anarchies in two different tongues don't tally. Translation leads to nonsense. It means an anarchy of anarchies.

These particles have their "idiomatic uses" which are different in different parts of the country, different in different countries speaking the same language, different with "educated" people and different with "simple" people. Moreover the idiomatic uses change and change quickly. What is to day "educated speech" is frowned upon 10 years later.

We may say: I call on you, I call upon you, I call for you; the meanings are essentially the same. Then we have I call you up, but there the alternative I call you down? We may walk along the street, down the street, on the street, in the street, at the street. Some readers may say, that at is incorrect, they may frown on people saying: up street we walk. But the simple folks may use even more "incorrect" particles.

Take the particle about. It is supposed to have a particular meaning, indicating near to a certain number as for instance: It is about 5 o'clock. I have about 5 hours still to work. I own about 350 books. The shop is about that place.

But about has other meanings too. There are people standing about. There are trees about the house. The guests were about the whole house. The servants were ordered about. They were looking about for a certain guest. They were right about his intention to leave the house. He was about to leave, taking with him a book about history. When questioned he was not right about this fact. Another incoming guest asked, what it is all about and how it did come about.

You, dear reader speak English. For you, all the different abouts make sense. You are accustomed to all these idiomatic uses because you heard and used them incessantly for 20, 30, 40 or say 80 years. But for a foreigner who wants to learn English, who diligently learns the meaning of the particles, or tries to learn them, they are a nightmare. He is stunned, bewildered. He thought that English is a language easy to learn.

He reads about someone putting down a baby, putting up a person, putting up with a mother-in-law, putting up a fight with a man and against this man, putting off the fight for a while, for his own sake and for the promise to put the matter down.

This is anarchy in language.

But the foreigner, who scorns English on account of this anarchy, does not realize that a similar anarchy exists in his own mother tongue. He usually does not realize this, because for him all the idiomatic uses of the particles are familiar and "natural" in his own mother tongue. It is only when he tries to find the exact equivalent for each particle in his and a foreign language, that he realises the anarchy in both languages, and the super-anarchy in translation efforts.

Bodmer and Hogben give in The Loom of Language four examples of particles differently used in different languages. They take four expressions in English, in which the same particle is used, and print in 3 other columns the equivalent expression in French, German, Swedish. Herebelow we shall give only the particles of the foreign languages, not the full expressions.

<u>English</u>	<u>French</u>	<u>Swedish</u>	<u>German</u>
<u>in</u> the street	<u>dans</u>	<u>på</u>	<u>auf</u>
<u>in</u> winter	<u>en</u>	<u>om</u>	<u>im</u>
<u>in</u> the evening	<u>le</u>	<u>på</u>	<u>am</u>
<u>in</u> good time	<u>de</u>	<u>i</u>	<u>zu</u>

Now they start from French and choose four expressions, which have the same particle in French. We shall give again the full expression in English, ^{only} in order to make the differences become better visible.

<u>English</u>	<u>French</u>	<u>Swedish</u>	<u>German</u>
<u>on</u> foot	<u>à</u>	<u>till</u>	<u>zu</u>
<u>to</u> Berlin	<u>à</u>	<u>till</u>	<u>nach</u>
<u>at</u> the coast	<u>à</u>	<u>vid</u>	<u>an</u>
<u>at</u> my expense	<u>à</u>	<u>på</u>	<u>auf</u>

These comparisons show clearly enough the anarchy existing in regard of the particles. But they do not tell the whole story. We may be impressed with the fact, that the same meaning is expressed with different particles in different languages or that the same particle is used for different meanings in different languages. But we may believe that the particles listed for French, Swedish, and German, are the ones and only ones which can be used for these meanings. But this is not the case. Just as we can say in English: in the street, on the street, at the street, we can use two and more particles in French, Swedish and German to express the same meaning in the street.

To show the complexity of the problem, it would be necessary to draw up columns for those four languages, showing not only one particle, but showing all the different particles used for this meaning, not only those sanctioned by the grammarians, but also those used by the simple man in the street, not only those used at present, but also those used 20 years ago, and now frowned upon.

The magnitude of the problem will become even more visible, when we draft columns in the four languages ^{only} for particles, but ^{in comparison} for equivalent words, indicating real THINGS, as for instance the meaning of horse, house, etc. Here simplicity, there anarchy.

When we now recall that, according to Bodmer and Hogben, about 30% of all words on a printed page (almost one third of all words) consist of particles, we may begin to realize, where the foremost difficulties in foreign language learning are to be found.

The problem before us is now clear:

Can semantography overcome the anarchy of the particles in all languages?

Can semantography give us a simple rule and simple symbols for the particles valid in any and all languages?

The answer is: YES. But a new approach in grammar is necessary.

THE NEW APPROACH

In this book an approach has been made to evolve a new grammar, a grammar based on the natural sciences. According to this new grammar of semantography all words in all languages have been divided according to their meaning, referring to

MATTER ENERGY SPACE TIME HUMAN NUMBERS

In simpler words we have said:

The words in all languages refer to our world in which chemical THINGS perform physical ACTIONS in SPACE and TIME. At the basis of all this are the mathematical NUMBERS and operations. Besides, very many words refer to the ACTIONS of the human SENSES. We have called these SENSE REACTIONS, and the words referring to them, we have called HUMAN EVALUATIONS.

We have learned that a word may belong to one or more of these divisions. The word stone refers to a chemical THING. The word falling refers to a physical ACTION of a chemical THING and each THING performs an ACTION in SPACE and TIME. The word sinner refers to a chemical THING, a HUMAN, which performs some ACTIONS, which he or other HUMANS EVALUATE "wrong".

Conventional grammar divides all words into nouns, pronouns, verbs, adjectives, adverbs, prepositions, conjunctions, interjections. The last three classes are termed particles.

Conventional grammar and the grammar of semantography tally only in so far as the verbs are the equivalents of physical ACTIONS (including SENSE REACTIONS), and the adjectives and adverbs are the equivalent of words pertaining to human EVALUATIONS.

Apart from these equivalents there are sharp divergences in regard of the other grammatical classes. A noun may be "everything" the Stone, the Falling, the Good, the Why and the Where, the Ohs and the Ahs. A word like after can be a preposition, a conjunction or an adverb.

Now, some grammar-minded readers may think that it is simple to divide words like stone, falling, good, bad, above, below, day, minute, etc. into THINGS, ACTIONS, SPACE, TIME etc.

But it may be very difficult to convince them that those little particle words like on, of, for, at, about, though, and, by, or, instead, with, too, but, etc. etc. fall into the groups of chemical THINGS, ACTIONS, EVALUATIONS, etc. etc.

But this is actually the case.

According to the grammar of semantography, the particles in every language must be considered as "shorthand words" for which an exact equivalent exists in the groups of THINGS, ACTIONS, EVALUATIONS, SPACE, TIME, and NUMBERS.

They have been invented by man to make his speech more fluent.

PRIMITIVE MAN INVENTED SHORTHAND WORDS

There is little doubt, that human speech has developed from cries and groans to indicate first reactions of our bodily system, then at a later stage to indicate the things and happenings in our world. It surely has taken ages, until man was able to pronounce a full sentence: bear killed son.

It may have taken another long time until man was able to combine his short sentences and to make longer sentences in order to make his speech more fluent. He may have said: I go, You go. Later on he invented the word too which actually means addition. I go, You go too. Another word, indicating addition is and. I go and you go. I go and you go too. I and you go.

Such short staccato sentences are still to be found in sharp military orders. We shall meet. Position: crossroad. The shorthand word for position is at. We can say with more easiness and fluency: We shall meet at crossroad.

It is idle to ponder about what came first the "big" word or the "small" word. But it can be shown that for every "shorthand word" there exist a "big" word with an exact meaning. Position has an exact meaning, referring to a point in space. Therefore the particle AT the crossroad has an exact meaning which must be translatable in another language using the equivalent for position. However the same particle AT my expense has no connection with a position in space. It cannot be translated with the same meaning position. It is an idiomatic use, whimsical and untranslatable.

Our task ahead is now clearly visible. We have to examine each particle in each language and attach it to the "big" word having an exact meaning as to SPACE, TIME, THING, ACTION, etc. The symbols for the "big" words like addition, position, etc. are already evolved. They are valid in any language. We can use these symbols as they stand or a modification of them to indicate the particle symbol, which would be valid in different languages.

THE SHORTHAND WORD AND THE "BIG" WORD

Below are printed a series of sample sentences as used in ordinary speech with one or more particles. Besides is the "big" word printed, and short sentences, in which the particle is replaced by the "big" word. Nevermind the clumsiness of these short sentences. They are only formed to show the use of the "big" word, which has an exact meaning, and for which we have a symbol valid in different languages.

SHORTHAND PARTICLE	"BIG" WORD MEANING	SENTENCE WITH PARTICLE	SENTENCE WITHOUT PARTICLE
and	Addition	I work <u>and</u> he works.	I work. <u>Addition</u> : he works.
too	Addition	I work <u>and</u> he works <u>too</u> .	I work. <u>Addition</u> : he works.
also	Addition	I work <u>and</u> he <u>also</u> works.	I work. <u>Addition</u> : he works.
moreover	Addition	I work <u>and</u> <u>moreover</u> he works.	I work. <u>Addition</u> : he works.
furthermore	Addition	I work <u>and</u> <u>furthermore</u> he works <u>too</u> .	I work. <u>Addition</u> : he works.
besides	Addition	I work. <u>Besides</u> he works <u>too</u> .	I work. <u>Addition</u> : he works

THE SHORTHAND PARTICLE AND THE BIG WORD MEANING

SHORTHAND PARTICLE	"BIG" WORD MEANING	SENTENCE WITH PARTICLE	SENTENCE WITHOUT PARTICLE
as well as	Addition	I, <u>as well as</u> he, work.	I work. <u>Addition</u> : he works.
in add. to	Addition	He works <u>in addition to</u> me.	I work. <u>Addition</u> : he works.
with	Addition	I work <u>with</u> him.	I work. <u>Addition</u> : he works.
with	additional Tool	I work <u>with</u> a hammer.	I work. <u>Additional tool</u> : hammer.
with	Union (Addition, more emphasized)	I work <u>with</u> him.	We work <u>unitedly</u> . (in Union)
together	Union "	I work <u>together with</u> him.	We work <u>unitedly</u> . (in Union)
along with	Union "	I work <u>along with</u> him.	We work <u>unitedly</u> . (in Union)
again	Repetition	I did it <u>again</u> .	I <u>repeated</u> it.
against	Opposition	I am <u>against</u> him.	I <u>oppose</u> him.
either, or	Alternatives	<u>Either</u> I work <u>or</u> you work.	1st <u>alternative</u> : I work. 2nd <u>Alternative</u> : You work.
neither, nor	Alternatives Additional	<u>Neither</u> I <u>nor</u> you work.	Both Alternatives added: We both don't work.
at	Position	I work <u>at</u> home.	I work. <u>Position</u> : home.
for	Purpose	I work <u>for</u> fun.	I work. <u>Purpose</u> : fun.
for	Exchange	6 apples <u>for</u> 1 shilling	<u>Exchange</u> : 6 apples - 1 shilling
of	Relation	The mayor <u>of</u> London	The mayor. <u>Relation</u> : London.
of	Relation Family	The boy <u>of</u> Morrison.	The boy. <u>Relation</u> : Morrison.
of	Possession	The house <u>of</u> Morrison	The house. <u>Possessor</u> : Morrison.
because	Cause	I work <u>because</u> I need money.	I work. <u>Cause</u> : Money need.
by	Cause	It works <u>by</u> water power.	It works. <u>Cause</u> : water power.
by	Origin, Cause	A work <u>by</u> Shakespeare	A work. <u>Origin</u> : Shakespeare.
from	Origin, Start	A work <u>from</u> Shakespeare I travel <u>from</u> London.	A work. <u>Origin</u> : Shakespeare. I travel. <u>Start</u> : London.
away	Departure	I go <u>away from</u> London.	I <u>leave</u> London.
towards	Approach	I travel <u>towards</u> Glasgow.	I <u>approach</u> Glasgow.
to	Stop, End	I travelled <u>to</u> Leeds.	I travelled. <u>End</u> : Leeds.
etc.	etc.	etc.	etc.

These examples should suffice to indicate the procedure to be used in coping with the particles. A similar analysis could be made with all particles, and a list of the essential symbols will be given ~~at the end of~~ ⁱⁿ this chapter.

The reader may perhaps assume, that the writer of semantography would have to abandon the symbolisation of the particles and would have to translate all his writings into short staccato sentences like, I work. Purpose: Fun. He. Relation: Father. etc.

Although such short sentences would be perfectly clear, - (and we should write in short sentences only) - such short sentences would be all too short. They would impose a heavy strain on any writer. They would make writing very difficult.

For this reason we shall evolve symbols for particles, in order to make the writing easy and natural and fluent.

However, the symbols for the particles would be very similar to the symbols for the "big" words, indicating the exact meaning. The reader could not use the particles in an idiomatic, whimsical and non-sensical way. He could write "I am in the box." (using the spatial symbol for inside). But he would not be allowed to use the same symbol to write "I am in particular." In fact, the symbol for in [] would prevent him from

using it.

If the symbols for the particles are chosen in such a way, that they indicate the "big" meaning, then the anarchy of the particles would cease and it would be simple to translate the meaning of one particle of one language into the equivalent particle of another language. The symbol would be valid for any language. And - if there should not exist a special particle in some "primitive" language, there would be no difficulty. The reader would simply use the "big" word for the translation.

How the symbols can be derived from the "big" symbols will be shown in the next section.

CONSTRUCTING THE PARTICLE SYMBOLS

We have already outlined the method: We have to establish the "original" word (the "big" meaning) from which a particle stems. Then we shall reduce the size of the original symbol and get the smaller symbol for the particle. If we can simplify the particle symbol in the process, we would save writing time for these much used particles.

However this reduction in scale may not always be possible. There are the limitations of our typewriter and furthermore, we may coincide with another symbol. Here below these differences in method are demonstrated.

(1) Reducing in scale.

This we have done before

□	^	v
X	X	X
multitude	multiplication	multiple

derived particle symbol

X	XX
much many very	very much very many

We can proceed in a similar way

□	^	v
+	+	+
addition	addition	additional

+	++
and with too plus also more further besides	furthermore moreover etcetera as well as along with over and above in addition to in conjunction with

However, we learned before, that there is no sharp definition between many and very many. You are not compelled to make two multiplication marks: the meaning is very vague anyway. Grammar books tell us that a particle can be a preposition, a conjunction, but also an adverb or an adjective. In other words, it may sometimes indicate a HUMAN EVALUATION.

In a similar way you are not compelled to write two addition marks for the meaning of furthermore, etc. One mark is sufficient.

(2) Reducing in scale and simplifying

In the following examples the large symbol is shown only once (not three times, indicating THING, ACTION, EVALUATION). We are already trained to evolve the 3 meanings.

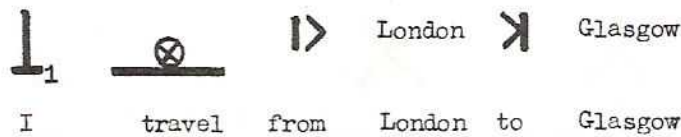
<u>original symbol</u>	<u>particle symbol, reduced and simplified</u>
⇨	⇩
start, begin .....	.....from

ORIGINAL SYMBOLS AND REDUCED PARTICLE SYMBOLS

original symbol particle symbol, reduced and simplified

→	>
Departure.....	off, away
→	>
Approach.....	towards
→ ↘	> \
Stop, End.....	to

Now we can write sentences more fluent. Instead of writing: I travel, Start: London. Stop: Glasgow. we make only one sentence with the help of the particles.



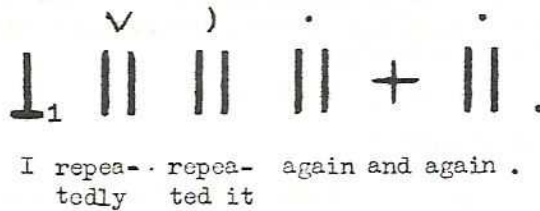
(3) Using the big symbol with a dot, indicating the particle

Reducing the big symbol is sometimes not advisable, owing to possible coincidence with another meaning, or the limitations of our typewriter.

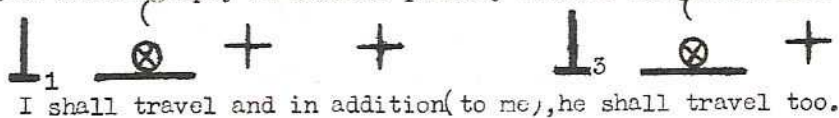
We shall now evolve the particle symbol for the meaning: again from the original meaning of repetition.

<u>original symbol</u>	<u>reduced particle symbol</u>	coincides with
<u>Repetition</u> ,..... <u>again</u> (line repeated)	but this would collide with	<u>near</u> <u>far</u>

To avoid such a coincidence in meaning, we shall use the original symbol in full size and place a dot over it, to indicate the particle. Thus we can write







This sentence is of course a non-sensical "repetition" of same meanings, but it shows what is meant. We don't realize that we use such non-sensical repetitions very often in our speech. In semantography it becomes plainly visible in geometrical lines, as for instance:



The next example is the particle meaning during,while,which we derive from the original meaning Time-limits,Time-interval.

Here the reducing in scale is impossible,We cannot draw smaller lines on our type-writer to indicate the fingers on the dial.A reduced and simplified symbol,showing a small circle,may be taken as the symbol for mouth,speech.In such a case,it is better to draw the original big symbol and place a dot over it.

<u>original symbol</u>	<u>particle symbol</u>	<u>reduced,simplified symbol</u>	
			
time interval time limits	during while	this reduced symbol may be mistaken for the <u>mouth</u> symbol	<u>speech</u> <u>mouth</u>

(4) Going the other way round.

In all the three methods mentioned above we ~~have~~ proceed^{ed} in the same way:from the big symbol to the small.However,some particles are so much in use that we have already evolved a simple symbol,for instance,for over,above.The "big"word is Superiority.This is the adjectival noun,and we have already learned how to depict this meaning.

			
over,above.....Superiority		together.....Union,Togetherness	

As said many times in the foregoing chapters,we don't need the adjectival noun.The difference can be neglected in simple reports written in semantography.Similarly we may use the particle symbol or the original big symbol.The meaning is essentially the same.And we should always endeavour to write short sentences.

In the following sections of this chapter new symbols will be evolved,symbols for "big"meanings and the subsequent particles.

We have to deal with the particles,because they make up 30% of our speech;furthermore,they lead to important meanings which are in much use.

OF - OF ALL THE PARTICLES

The ambiguity in: Government of the people.

If you ask me,what was the most difficult word to translate into a symbol,I answer: the most difficult problem was to find a proper symbol for the particle of.I struggled for 5 years,and discarded many symbols.I believe now I have licked the problem.

From the previous chapters we know why this little word of presents so many difficulties.It is one^{of} the particles which are used in the most irregular and idiomatic manner in most languages.The dictionary lists more than 20 different uses in English. Even Ogden's Basic English dictionary lists more than 12 uses.The foreigner is bewildered about the somersaults,tricks and ambiguities of this little English word of. For him it is a monster with more than 7 heads.

Take the words

Government of the People

These words are supposed to give the quintessence of the meaning of democracy.These words mean,as everybody knows,that the People governs.Yet,these words mean too,the exact opposite,that the People is governed.

To prove this assertion,just take these words:

The Treatment of Father

These words may mean that Father is a physician who applies his special Treatment on some patient.But it means too the exact opposite,that Father is a patient who is treated.

"GOVERNMENT OF THE PEOPLE" DOES NOT MEAN DEMOCRACY

Treatment and Government are UNITof ACTION words, but they do not indicate if the ACTION is active or passive. The verbs show this difference clearly (see Footnote)

ACTION word		UNIT of ACTION word	
active	passive	active	passive
to treat.....	to be treated	Treatment.....	Treatment
to govern.....	to be governed	Government.....	Government

So we see that a ruthless dictator who governs the People, even against their own will, can rightfully and grammatically correct, claim that his is a

Government of the People

and if it should happen that he and his henchmen are not foreign invaders, and are not of the aristocratic class, but come from the "People" the poor class of hard workers, why, then they can claim with even more rightfulness that theirs is a

Government of the People

We see that these words as they stand are ambiguous to an intolerable extent and if we think of modern methods in election machinery than we get a glimmer of the confusion, which has been created by inadequate language. To be sure, the same ambiguity exists in other languages

in French: Gouvernement du Peuple

in German: Regierung des Volkes

and in other languages. The confusion is created because there is no difference between the active and passive meaning in the UNITof ACTION words. We have not in English and other languages a UNITof ACTION PASSIVE word as for instance

To be treated To be governed

The particle of, combining both words Government and People, gives no indication whether the People governs or is governed.

If serantography is supposed to be a writing clearer in meaning, it should show in unmistakable geometrical lines, what is meant.

Obviously the particle of, combining the words Government and People, indicates a relation between these two meanings.

Now, we have already an international mathematical symbol indicating relation:

$$a > b \qquad b < a$$

This mathematical symbol indicates a relation between a and b. The direction of the arrowhead/which part is "greater" in value. It reads

$$a \text{ is greater } > \text{ than } b \qquad b \text{ is smaller } < \text{ than } a$$

To express a relation between ordinary numbers we may write

$$4 > 2 \qquad 258 < 4699$$

4 is greater than 2 258 is smaller than 4699

If we want to apply this mathematical symbol for ordinary language, we should agree that it should indicate a relation between two meanings. The direction of the arrowhead should be used as in mathematics, to indicate which meaning is "greater" in value, which meaning is "greater in importance", which meaning is "smaller" and "dependent" on the "bigger" meaning.

So we get a symbol for our particle of, but we see that we can write it both ways

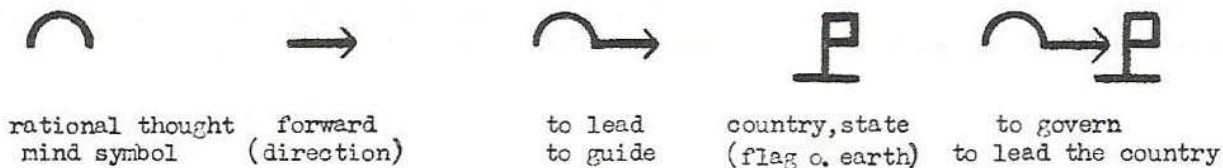
$$\text{Government } > \text{ People} \qquad \text{Government } < \text{ People}$$

of of

Meaning: The People is governed The People governs

Footnote: There are other ambiguous verb forms. You go ~~to~~ a man and you find on his door a notice: REMOVED. Has he been forcefully removed (evicted) or did he move on its own will?

On page 176 we have already evolved the symbol for to govern, to guide, to lead the country.



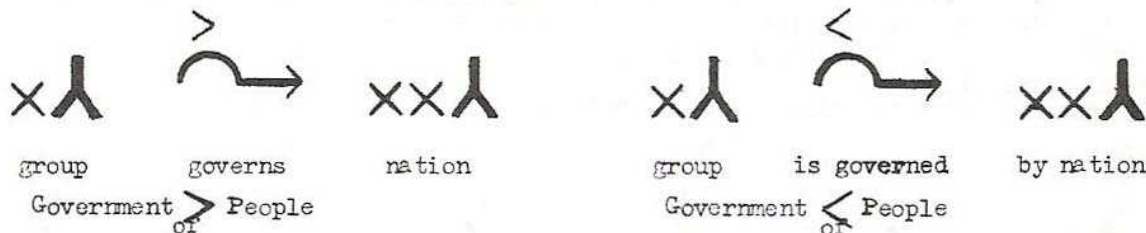
To be sure, there are two variables with relative meanings in this symbol. First we have the symbol of the mind, indicating a meaning which varies with each single mind. Moreover we can interchange it at will with the mind symbol for passion or conscience.

Then we have the symbol for forward, indicating a direction in space. We know by now that any direction in space has only a relative meaning. A government may consider itself "progressive", governing with reason only, whereas other minds may think that this is the most reactionary government, in which only wild passion reigns. It's all relative, of course, and the recognition of this relativity should make both parties not so sure of themselves and their theories.

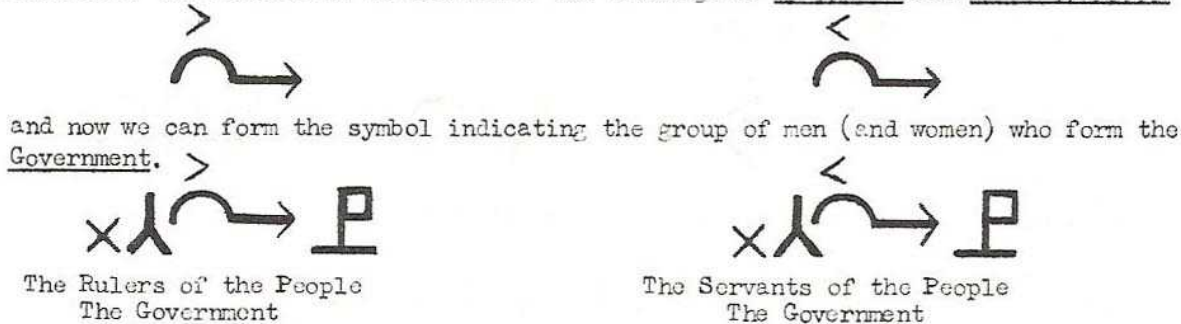
The country is indicated by its symbol, a flag on a territory. Now, we know that the most important thing on this territory are the human beings on it (although the ants might be of a different opinion). We have evolved a symbol for a group of persons, a committee, a board, etc. We have postponed the construction of a symbol for nation because this is a very important and much debated meaning. In this chapter we shall therefore use only a makeshift symbol for nation.



Government is one of those words with the dual aspect: ENERGY-MATTER. It means the ENERGY to govern (physical ACTION). But Government means also the MATTER, the group of human beings (chemical THINGS) who do the governing. Let us now put these two groups, the government group and the nation opposite each other with the symbol for to govern between them and the symbol for relation on top of it. Then we get:



Now we remember where we saw these relation symbols on top of other symbols. It was on page 188 in the chapter "To ^{do} or to be done for" when we discussed the active and passive verb form on Shakespeare's Othello and Desdemona. Indeed the relation symbols on top of action symbols indicate the active and passive form by pointing in the direction of the ACTION. Now we can write the meanings of to govern and to be governed



More about all this in the chapter on the symbol for Democracy in the third book.

A FAMILY OF RELATIONS

We may begin with the old mathematical symbol indicating relation and write down the big symbol and the small symbol, which stands for the particle.



We may now write two sentences, which mean essentially the same, just as the two mathematical statements below, mean the same: "4 in relation to 2 is the bigger number".



I in relation to books.

Books in relation to me.

In both sentences I, the writer, have laid stress on the indication that I consider myself bigger in importance in relation to books. However, what meaning is contained in a similar sentence when we reverse the direction of the relation symbol?



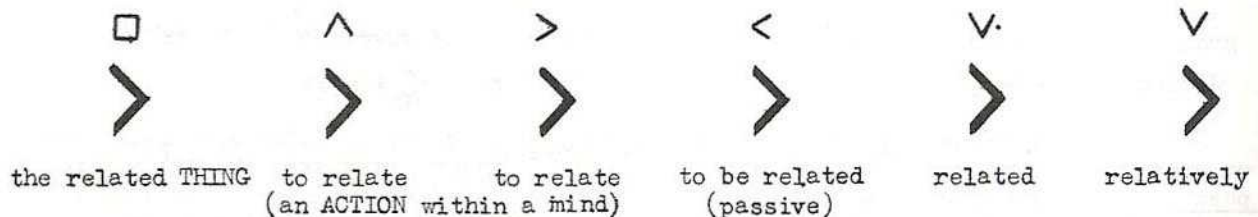
Books in relation to me.

Now I have indicated that I consider books somewhat bigger in importance than my humble self. This sentence means Books about my person as we shall see later on.

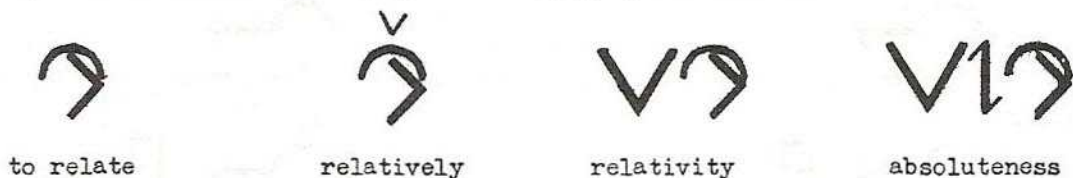
This consideration brings us immediately to the conclusion that the word relation refers to a human EVALUATION. This may be proved by asking: does the word relation as it stands by itself indicate a chemical THING (like I and books)? The answer is No! Does the word indicate a physical ACTION (like to live, to read)? The answer again is No! Then it falls automatically into the class of human EVALUATIONS.

Consequently the particles, of, on, about belong to the same class, when used in the meaning of relation.

We may now derive the other meanings, referring to THINGS and ACTIONS.



To make it perfectly clear that the meaning of to relate is an ACTION within our heads, a SENSE REACTION, we may place the mind symbol over it.



We had the choice between two relation symbols, pointing in opposite directions. The second one points to the passive form, and as we have decided to use mostly the active form, we may decide to use the relation symbol as indicated in the last lines above.

On the foregoing page we have found that the meaning of relation refers to a human EVALUATION, and this may be sometimes a very vague one. Consequently the meaning of the particles are sometimes vague too. When we write

$$\perp_1 > \overset{x}{\square}$$

it indicates only a relation between me and books. Now, there are various relations possible. I may own the books. I may have them only (borrowed, found, held in custody, held for sale, etc. etc) or I may speak about books, I may write books, and so on... there are various relations possible and the symbol above does not indicate a particular one. As particles are used in any language, we may as well agree that such and such a particle symbol should indicate such and such a meaning valid in any language.

As said on page 295 I wrestled for 5 years with that little devilish particle of, and I ask the reader to exert his utmost benevolence towards the solution proposed in the coming paragraphs.

A good advice, however, is the following: better be very clear about the relation you mean. Instead of writing Books of mine, you may as well add a symbol and indicate clearly Books I owe, or Books I borrowed, or Books I wrote.

$$\overset{x}{\square} < \perp_1 \cdot \perp_1, \lambda \pm > \overset{x}{\square} \cdot \perp_1, \lambda^{\circ} > \overset{x}{\square} \cdot$$

Books of mine . I , owner of books.. I , speaker about books
(ambiguous)

$$\perp_1, \lambda \setminus > \overset{x}{\square} \cdot \overset{x}{\square}, \setminus^{\vee} < \perp_1 \cdot \overset{x}{\square}, \setminus^{\vee} > \perp_1 \cdot$$

I, writer of or about books. Books, written by me. Books, written about me.
(ambiguous)

In the course of this chapter we shall see that we can give a clear indication of every relationship possible. We see already that the two particle symbols $>$ $<$ pointing in different directions can be translated in English by the following particles:

$>$	$<$
<u>about</u>	<u>of</u>
on, of	by

The examples above have shown us that the context of the sentence and certain words in the sentence (owner, speaker, writer, etc) will give us a clear indication of the kind of relation indicated by the particle symbol.

We must be aware that the particle is not always necessary. In fact, some expressions in various languages do not contain a particle, whereas a particle is found in the same English expression, as for instance

in English: I think of you.
in German: Ich denke Deiner. (no particle)
(see footnote)

and vice versa

in English: Give me bread. (no particle)
in French: Donnez moi du pain.






No harm is done if these nationals write the particle symbol. Give me $>$ bread, or if they don't write it: I think you. However, a particle symbol will always be appreciated. It can only be of help. Overleaf are a few examples of the use of the relation particles. A little exercise will help any national to grasp the meaning valid in different languages.

Footnote: However we can say in English I contemplate you. And in German: Ich denke an Dich. No particle in English, but a particle in German, contrary to the above expressions,

MEANINGS OF POSITION IN SPACE AND THOUGHT

Books	<	Smith	Thoughts	<	Man	Days	<	Month
	of			of			of	
Books	>	Smith	Thoughts	>	Man	Paper	>	Sale (an invoice)
	about			about			about	






In foregoing chapters we have seen that the above particle symbols can be used in a compound symbol to keep the meanings neatly apart, but nevertheless combined, as shown below in one example.

				
paper, written page	money	buy	paper & money share, bond, etc.	paper <u>about</u> a buy an <u>order</u>

Without the inserted particle in the compound symbol for order, there might be a mix-up in meaning, as the symbol for paper and money would come close together. Some readers might have got weary about this section, containing the symbol for of and about. However, here are the results of five years of hard labour, and - don't forget - about 30% of all our words in speech and writing and printing are particles. Reading all this for the first time, and a little superficially, may give the impression of complexity. However, this is not the case. These particles are almost self-explanatory, once you get a little practise. This is the case with the particles to follow.

POSITION




A position is the indication of a relation to a certain point in space. This definition may help us in the design of the symbol and its particle symbols.

				
position	to pose into position	at	here (stressing a position by repeating dots)	there

It is obvious that the word position refers in the first instance to a position in space. But the relation symbol gives it a wider meaning, a position in time, etc.

Work	>	London	Work	>	Night	Work	>	Education
	at			at			at	
	in						on	
							in	
Work	>..	>	London	Progress	>..	Reaction	..<	>.. + ..<
	here	at			here		there	Here and there

But we can symbolize position also ^{as} a pure mental conception, in which case we may add the symbol for mind. However, every individual is free to choose that mind symbol which he thinks he applies in every particular case: emotion, reason or conscience

		
My <u>position</u> , point of view where my <u>heart</u> stands in regard of any issue, poli- tics, religion, education, sex, marriage, etc. etc. etc.	My <u>position</u> , point of view my <u>rational reasoning</u> in regard of any issue, poli- tics, religion, education, sex, marriage, etc. etc. etc.	My <u>position</u> , point of view dictated by my <u>conscience</u> in regard of any issue, po- litics, religion, education, sex, marriage, etc. etc. etc.
ID	EGO	SUPREMO

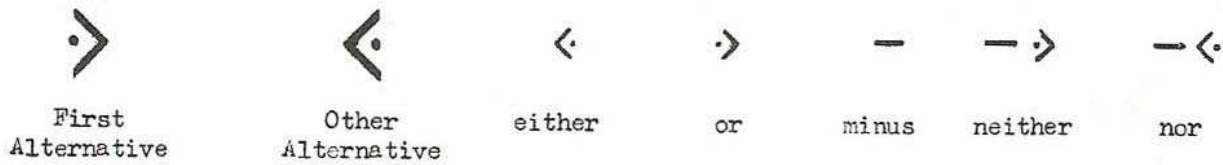
From the chapter The Relativity of Mind (p.180) and other chapters we know that the mind symbols indicate relativity. The position, point of view of every individual differs, and each one is relative only, never absolute. No individual can be absolutely right or absolutely wrong. Moreover, the individual can never ascertain whether his point of view is formed from his emotions, reasons or his conscience.

The symbols indicate clearly that relativity. We have the symbols of the mind, each showing one heart, one mind. We have the dot, indicating a point in space and we know that any reference to space is relative, and we have the mathematical relation symbol, which indicate that anything is related to something. Whatever we think, feel, or reason, we are related to our environment, our upbringing, and our heredity position, which directly indicates our relations to our family relations.

We could combine the position symbol with the symbol for earth or time to indicate a spatial or time relation. We could combine it with the symbol for politics, religion, education, sex, marriage, etc. to indicate our position to that particular issue.

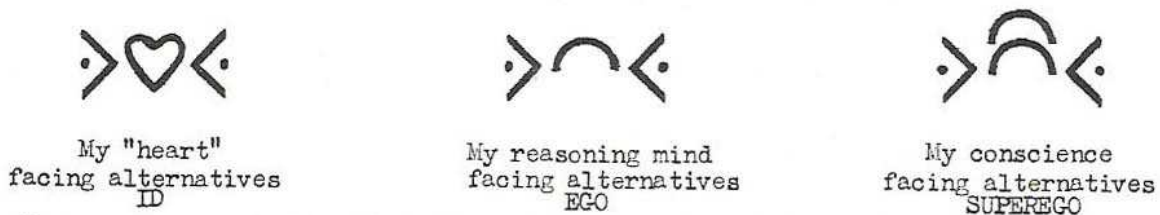
ALTERNATIVES

The meaning of alternatives indicate again a relationship and therefore we shall use again our symbol for relation. We may assert that alternatives mean positions which are not yet taken up. We shall therefore use the symbol for position in an altered form. The dot shall not be set in the spot indicating a position, but shall be "withheld", because we have not yet decided where to place it. This can be depicted as follows:



I shall be either in London or Glasgow, but today, to-morrow.

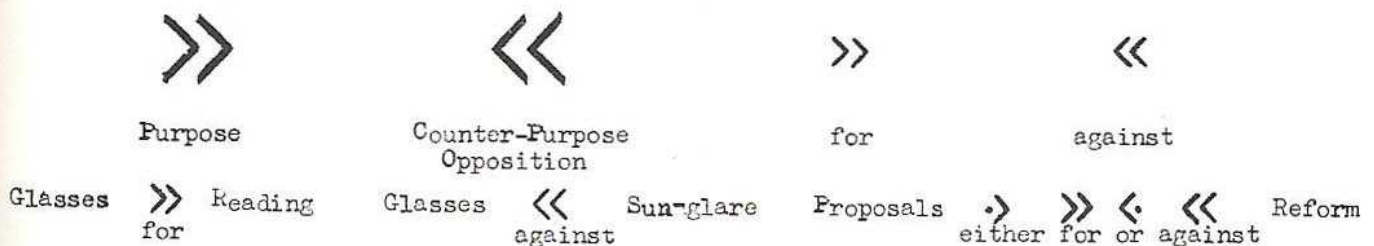
We can again depict this symbol with the symbol of the mind to indicate











These are very vivid symbols. Every day, every instance, we have to "make up our mind" one way or the other, steering our way precariously between Scilla and Charibdis.

PURPOSE

The meaning of the word purpose indicates again a relation. We do something in relation to something else to achieve a certain purpose. Here, however, we lay stress on special relations which would fulfill the purpose we have in mind. We may indicate this special stress on relations, by repeating the relation symbol. Reversing the direction of the symbol gives us the opposite meaning.







Although the word purpose indicates a pure mental concept, we may again add the symbol for mind to stress this point. Some people do senseless things "on purpose", lead by unreasoned emotion. If we think so, we may depict this with the heart symbol. However the person in question may believe that he was lead by his conscience. But in practical life and "for all practical purposes", the word is associated with reason and rational thought. We have seen these symbols already on page 173 and 176.

			
Purpose	Opinion (mind & mouth)	Proposal (voiced Purpose)	Contradiction, Objection voiced <u>Opposition</u>
			
Opposition	feeling of being " <u>against</u> " something	Anger (much against)	Fury (very much against)

We have derived the particle for >> from the above symbol of purpose. However there is another particle for which we have derived on page 253 from the symbol for exchange.

			
purpose	for	exchange	for



Sometimes the two different symbols for the particles for and for can be used in the same sentence. With other sentences however this cannot be done.

<u>Purpose</u> ^{OR} <u>Exchange</u>	Work >> Money.	Work  Money.	Work >> Fun.	Work  Fun.
<u>Exchange only</u>	6 apples  1 shilling	I take this  what it was offered.		

We may work for the purpose of getting money or getting fun out in exchange. Both particle symbols can be used. However, 6 apples are not for the purpose of 1 shilling.

If we remember these words: for the purpose and in exchange for, we shall never be at a loss to decide which particle to use. In the words: "a symbol for relation" or in the words: "for another symbol" we may have difficulty to discern Purpose or Exchange in these meanings. However if we use the above mentioned words, it becomes obvious: "a symbol for the purpose of indicating relation," in exchange for another symbol".

But the English language contains many idiomatic uses of the particle for which have nothing to do with Purpose or Exchange, and in such cases the above particles cannot be used. Here are some examples. This is the list contained in Ogden's Basic Words (77) under the heading for.

a place <u>for</u> dancing	Purpose >>	need <u>for</u> acting	Purpose >>
desire <u>for</u> food	Relation >	noted <u>for</u> wines	Relation >
time <u>for</u> thought	Purpose >>	good enough <u>for</u> him	Purpose >>
go <u>for</u> the letters	Purpose >>	timed <u>for</u> to-morrow	Relation >
put up <u>for</u> offers	Purpose >>	be <u>for</u> a person	Purpose >>
payment <u>for</u> goods	Exchange 	waiting <u>for</u> someone	Purpose >>
acting <u>for</u> another	Exchange 	sailing <u>for</u> America	Approach > |
A is <u>for</u> apple	Relation >	hoping <u>for</u> peace	Approach > |
cheque <u>for</u> £ 10.--	Relation >	looking <u>for</u> a letter	Approach > |
ready <u>for</u> bed	Purpose >>	send <u>for</u> him	Approach > | or Purpose >>

A little exercise shall soon acquaint the learner with these differences. But even if he should make a mistake, there is still the safeguard of the context, from which the proper meaning may be guessed.

Ogden cites another 10 idiomatic uses of the particle for, in some cases other particles, like that, for, relation, etc. should be used. In some cases, the particle can be omitted. We should always bear in mind, that certain expressions have a particle in English, but no particle in other languages.

He has no regrets <u>for</u> his acts	Relation >
He has no feeling <u>for</u> his family	Relation > or Approach > | <u>towards</u>
He was responsible <u>for</u> her death	Relation >
He went away <u>for</u> this reason	Cause <u>because</u> (see later chapt.)
He kept away <u>for</u> fear of the law	Cause <u>because</u> " " "
He will go to prison <u>for</u> the first time	No particle necessary ...go the first time
He will be there <u>for</u> a long time	" " " ...be a long time ther
There is no cause <u>for</u> protest	No particle or only Relation > ..cause to protest.
Every judge would say the same thing word <u>for</u> word	use the particle <u>every</u> ... <u>every</u> wor
	or <u>after</u> ...word <u>after</u> word
Men are like animals, but <u>for</u> their brains	Exception: <u>except</u> □ symbol f, out

Ogden realised all the tricks which this little particle can play in the English language and therefore he cites very many examples. Besides the ones mentioned above he registers: We took him for an expert. He had a name for keeping on the right side of the law. For all that; for ever; for it was untrue; for my part; for the most part; make room for; go in for; an eye for; for example; for short; come up for discussion; an ear for music; make things warm for a person.

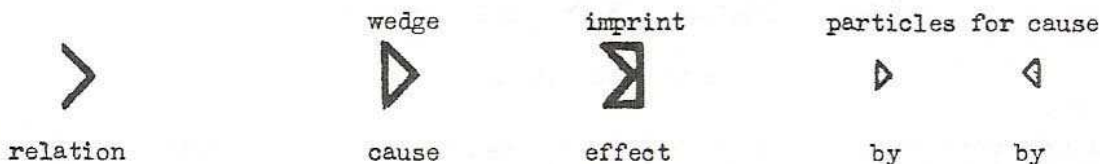
In all the above cases we can quickly find the best symbol. The for refers mostly to Purpose, Exchange or Relation, in some cases to Approach, or Cause (because) etc. These meanings exist in every language.

CAUSE AND EFFECT

In this long chapter on the particles and especially in the last sections of it, we dealt with a whole "family of relations". We have used the mathematical symbol for the meaning of relation in each of these different meanings.

Now we shall come to ^{one of} the most important relations in the universe, the relation between cause and effect. The "law of causation" is, according to J.S. Mill, the "main pillar of inductive science". Whatever happens in this universe, it is preceded by some prior happening to which it is directly related. We say that the second happening ^{represents} the effect of the foregoing happening, which is termed the cause.

In line with the other relation symbols, our new symbols for cause and effect, will bear the mathematical relation symbol. However, here we are in a position to design our symbols in such a way, that they depict directly in simple outlines a THING which "is" a cause and another THING which depicts the caused effect: a wedge and its imprint.



You may miss the particle for effect. But there is none in the English language and in many other languages. Even the by ▷ particle pointing to the right, cannot be used for the translation of ordinary English into semantography, as the examples below show. However it may be clear, that we can use both particles for cause and we may even draw a smaller symbol for the particle denoting effect if there should be such a particle in some language, thus: ◁



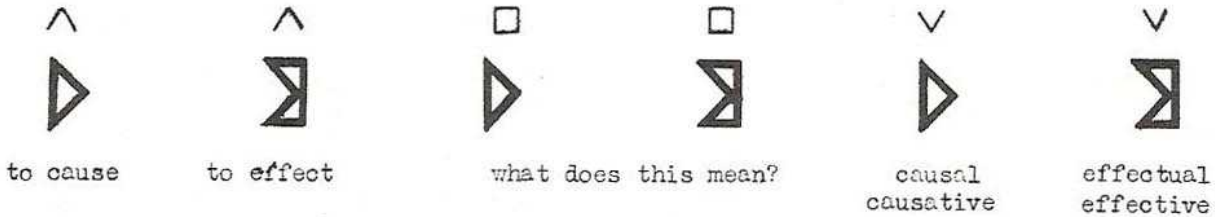
However, it may be the other way round; that some destruction (of a dam, for instance) caused a flood. Then we would write

THE MEANINGS OF CAUSE AND EFFECT ARE EVALUATIONS

Destruction \triangleright Flood
causes

Flood \triangleleft Destruction
(caused)by

The equivalent of the symbol particle \triangleright is non-existent in English. Instead, we use only the verb to cause. We can, of course, depict the verb with our usual ACTION symbol.



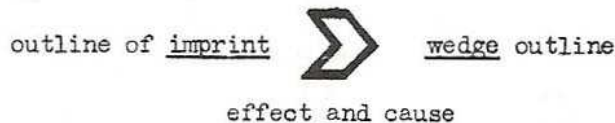
It is not so easy to determine the meaning of the above symbols with the THING indicator on top. We must first decide in which of the three classes: THINGS, ACTIONS, or EVALUATIONS the words cause and effect fall. The words, as they stand, do not refer to a particular chemical, geological or biological entity of our world, like the words stone and horse. They also do not refer to a distinct physical ACTION like to fall, to break. So we have no choice than to put these words in the third class, human EVALUATIONS, and there they actually belong. The words cause and effect are meanings within our head. They are grammatically adjectival nouns and should be depicted as such. And they are human EVALUATIONS all right. How many times have human beings evaluated something to be wrong, ugly, useless, etc? And how many times have human beings evaluated something to be the cause of something which was considered the effect of this cause? And how many times have human beings erred in such EVALUATIONS?

Primitive people still attribute the lightning and the thunder as effects, caused by the wrath of the evil spirits. Highly advanced people still go around with all kinds of mascots and talismans in the firm belief it will have a good effect and will be the cause of luck. How many times do we mix up cause and effect?

In the last chapter of this second book, the organisation and the task of the Institute for Semantography is outlined. Its primary task will be to test and retest all symbols, to examine proposals for new and better symbols, brought forward by members of the Society of Semantography.

Herebelow is an example how a very important symbol might be improved in order to have the strongest possible semantical effect on people.

We may put the symbols for cause and effect together. Somehow they are used parallel for the same meaning. To cause a flood and to effect a flood means exactly the same. So let's put the meanings together and form a new compound symbol. It's a double relation and we shall double the relation symbol.



This is a very vivid symbol. It looks like a wedge, which however had received an imprint itself. It is a vivid outline of the meaning that each effect is the cause of another cause, which causes a new effect, which in turn...etc, etc. If a thing is pushed, it will give a push to the next thing...etc, etc.

The symbol above is a vivid demonstration of the law of causation. Each cause has its effect and each effect in turn becomes the cause of another effect...etc.

But who decides what is cause and what is effect? Only a mind. And the possessor of this mind will apply only reason and rational thought to decide between cause and effect. We shall therefore use the particular mind symbol and shall place it either on the wedge outline or the imprint outline



Would such a symbol have a wholesome effect, if taught in school? It would, undoubtedly. If we would only realize how important it is to clear up all muddled thought about these two meanings. In fact, the peace of the world depends directly on it. It can easily be proved that such muddled thought led directly to world war II and spurs already another world conflict.

Take the Germans, a nation of about 80 million people within their European boundaries with another 20 millions scattered all over the world. Today they blame the allies as being the direct cause of their misery. The allies and only they are the cause of all of it. Many reports from sober observers point out that the whole of the German people (with a few minds excepted) believe all ill effects now suffered by them are caused by the allies, and the Nazi movement, apparently still strong, issues leaflets with very simple questions: "Who caused the destruction of our cities, Hitler or the Allies? Allied bombs caused it. And who is the cause of our misery now? The allied occupation powers."

After the first world war, the allies did not occupy Germany, and the cities, the factories, the provisional and state governments remained intact. The lost war brought misery of course. But then the Germans recognized clearly the cause of all their misery: Versailles and Weimar. It was clear as the sun. There was no such misery under the Kaiser. Having found out the direct cause, they set about to destroy it and in the end they did destroy the Weimar government. Now, they say, it was better under Hitler. And again their minds are turned to war, to the third world war, to remove the cause of their present misery.

And this mix-up of cause and effect is performed by people, literate, advanced, educated, etc. etc. If they don't clear their minds about the meaning of cause and effect they will go on to greater and even greater misery.

But the mistaken evaluation of cause and effect is not confined to politics and people. We find it in that realm where the "law of causation" is the main pillar, in the realm of science. Take for instance the following fact.

All of us know that the moon or the sun just rising over the horizon (or just going down) looks much bigger (almost three times as big) as when the moon or the sun are high up in the sky. There they look much smaller. What is the cause of this difference in size as observed with our eyes?

You can find it in books on physics. There it is said, that the rays of the moon or the sun (when near to the horizon) must penetrate denser layers of air, which break the rays in such a way, that we see a larger moon and a larger sun.

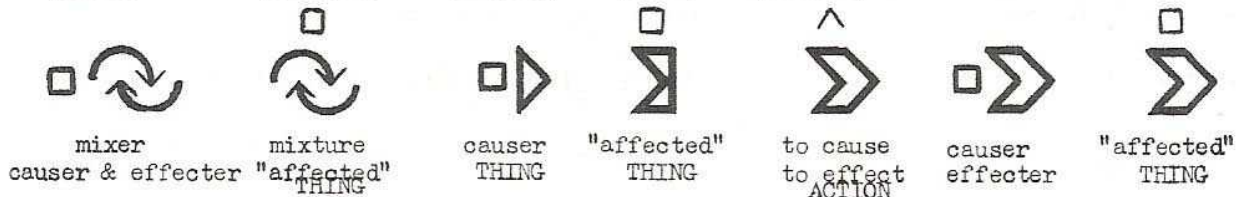
The cause and the effect of this phenomenon has thus been clearly determined.

Now we learn that it is all wrong. The atmosphere has nothing to do with it.

It has been found that an airplane 1000 ft high up in the sky, looks much smaller than 1000 ft away on the ground. The matter was investigated and two large disks of exactly the same size, representing the moon were fixed in a wide and high building. One disk directly overhead, the other at the end of the building horizontally. Invariably people guessed that the disk overhead must be much smaller than the disk ahead.

The effect was known for ages. But the cause? It's definitely not the refraction by atmospheric layers. So we have to look for another cause. But we still don't know the real cause. One thing is sure. It has to do with the working of our eye. "Because" when we stand on our heads, or bent down and look through the legs, the delusion of the big moon disappears. In view of the fact, that we know so little about the mechanism of our eye, it may take centuries of research until we may believe to have found the real cause. But it may well be, that we shall not find it at all. The branch of modern "statistical" physico-chemistry deals with phenomena which formerly had been attributed to certain laws of nature, bringing about cause and effect, as for instance equal distribution of dissolved particles in a liquid. It has been found that the effect: equal distribution is not caused by a "law of nature". Actually the particles are wandering aimlessly through the liquid; but by "sheer statistics", after a while, about the same amount of particles will enter and leave any part of the liquid. There is no particular cause.

Let's go back to our symbols and solve the difficulty with the THING indicator. We know that the meanings of cause and effect are very different. Yet, the ACTION to cause a flood or to effect a flood, is the same, namely the one action between cause and effect. Similarly if we place the THING indicator in front to get the causer (the THING which is the cause) we find that the causer is also the effector, just like a mixer is the causer and the effector of a mixture. Yet mixer and mixture are two different THINGS.



We see now, that the combination of the meaning of cause and effect in one symbol has its merits, because we have now one ACTION symbol only for to cause and to effect. Furthermore our rule for THING as shown in mixer and mixture, is readily applicable, whereas it is not with the two separated symbols for cause and effect. The symbol for cause with the THING indicator on top does not indicate the "affected" THING.

Lastly, we see that the English language has a past participle "affected" to indicate a THING under the effect of a cause. In semantography we can indicate this with our past) indicator, or with our indicator √. if transformation of the THING has taken place. The reader is asked to peruse the chapters on pp. 191 - 194 and pp. 243 - 246.

There is a great temptation to tackle here the symbol for the particle because. In the English language, this word contains directly the word cause, and in fact, this particle is always used to answer the question about a cause, Why? - Because!

However, we shall design this symbol when dealing with the question mark.

OF AND ABOUT

With the above section, the sections on the family of relations have been ended. It may be fitting now to give a list of sentences in which the particles of and about play their tricky rôle. Alongside are the same sentences but without the ambiguous meanings, replaced by the appropriate symbol.

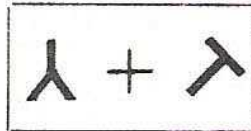
Love <u>of</u> animals	Love }| animals.....or.....	Love |> animals.
	to	from
	(You love animals)	(Animals love you)
	End, Aim	Origin, Start
Talking <u>of</u> writing.....	Talking > writing.....	Relation
	about	
Made <u>of</u> wool.....	Made |> wool.....	Origin, Start
	from	
Wars <u>of</u> conquest.....	Wars >> conquest.....	Purpose
	for	
A touch <u>of</u> the hat.....	A touch > the hat.....	Position
	at	
Get clear <u>of</u> the wheel.....	Get | > |> the wheel.....	Start, Departure
	away from	(Employ only one symbol !)
Books <u>of</u> Smith.....	Books > Smith.....	Relation
	about	
	Books |> Smith.....	Origin
	from	
	Books < Smith.....	Cause
	by	
	Books owned by Smith (see next section)	
We met <u>about</u> 4 o'clock.....	We met || 4 o'clock.....	Nearness
	near to	
I own <u>about</u> 350 books.....	I own || 350 books.....	Nearness
	near to	
The shop is <u>about</u> that place	The shop is || that place....	Nearness
	near	
	The shop is > that place....	Position
	at	
	The shop is) that place....	Circle
	around	
Trees <u>about</u> the house	Trees) the house.....	Circle
	around	
Guests <u>about</u> the house	Guests □ and □ the house...In and Out	
	in out of	
What is it all <u>about</u> ?	What happened? (no particle) or >	Relation

AND - WITH - OWNERSHIP

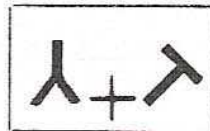
We have used the mathematical plus + mark, indicating addition, to stand for a whole series of particles like and, with, too, plus, also, more, further, furthermore, etc. (p. 293) Very many tests with thousands of expressions in different languages have shown the necessity of a handy division of the meaning of and, with and a particle indicating ownership. To indicate these three meanings we shall place the plus mark in three different positions within our writing lines.

top writing line	_____+		
ground writing line	_____+		
Meaning:	Addition	Ownership Addition	Help Addition
Significance:	(ordinary)	(down to the ground)	(high up in esteem)
Particles:	and, with	's	with
Examples:	I <u>and</u> father work. I work <u>with</u> father.	Father's house	I work <u>with</u> (the help of) father I work <u>with</u> a hammer

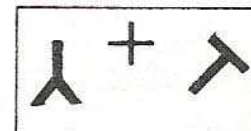
We see that the plus mark "high up" means: "with the additional help of". There is a difference between the meanings



man and hammer



man's hammer



man with hammer

Significance: ^{often} two words, without connective significance

ownership

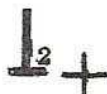
connective significance

We must now enlarge the meaning of ownership. If a man owns a hammer it is his. But so is his brain, his arms, his legs, his ability to work, his work, his earnings, etc.

This application of the plus mark leads us directly to the expression of the word his and all the other so-called possessive pronouns. Of course, we must first know how to write the personal pronouns I, you, he, she, etc. Then we can indicate their possession mine, yours, his, hers, etc. We have already evolved the symbols for the personal pronouns on page 274. We may now add the plus mark.



mine



yours



his



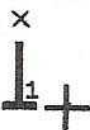
hers



its

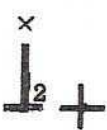
(male or female) (male or female)

Now the plural mark on top (multiplication symbol) to indicate we, you, they.

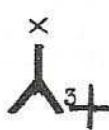


ours

(males and/or females)

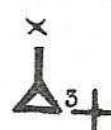


yours



theirs

(males)



theirs

(females)

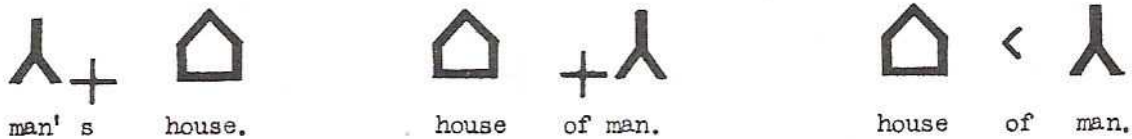


theirs

(others than humans)

There are no particular words in English to denote the ownership of a multitude of male or female human beings or not human beings (animals, plants, minerals, etc). We have already used the individual symbol to indicate a mixed crowd of males and females, (as shown on page 274), but we can draw the symbol for man and woman together, as we did to depict the meaning of people (see p. 272) and write People's future, their future

Now, we can write man's house and house of man. The latter expression should be preferred in semantography, because the first symbol should indicate what is meant. If we say man's house, we mean a house not a man, so the symbol for house should come first; house of man. We have expressed the particle of by the relation symbol. Now we shall see that we can express it too by the plus symbol, if we want to indicate a close relationship, like ownership. We may place the plus symbol on that side of the owner symbol which faces the symbol for the owned object.

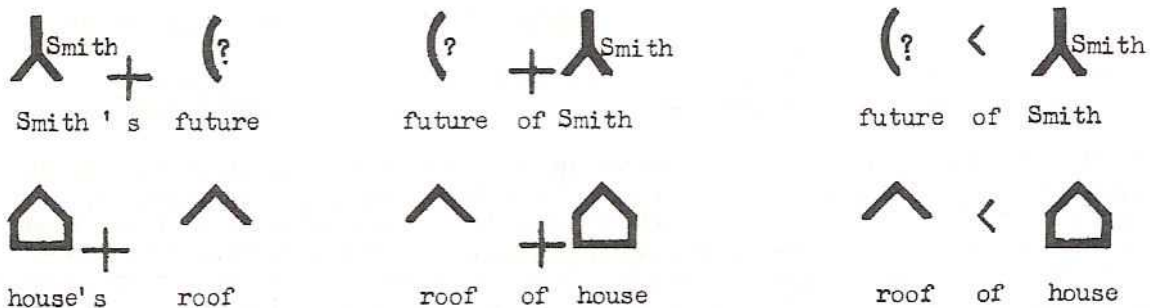


The plus $+$ indicates a strongly tied relationship $<$ a vague relationship

The reader may guess that the placing of the plus, close to the owner symbol is influenced by the so-called saxon genitive, the use of an apostroph and an s to indicate a kind of ownership: man's house, man's future, etc.

We see that the plus symbol indicates not only private ownership according to civil law, but an ownership of a wider meaning. No doubt, Smith's future is his own future, which no one can claim. Every house has a roof, and if it hasn't, it is just not a house, but a construction job or a ruin. A house is a thing, which among other things claims a roof of its own. We may therefore employ the plus symbol in such a case, but we are equally free to use the relation symbol only. We may even agree to use the relation symbol if we want to express in a general way: the limbs of man, man's limbs. However, if we want to express Mr. Smith's limbs, we shall better employ the plus symbol.

There is no strict rule. No harm is done if we mix both symbols and use them as we wish.



As said before, we are free to use both particle symbols, but if we wish to stress a strongly tied relationship, we may use the plus symbol.

THE UNION OF SPACE AND TIME







The chapter on page 213-214 contains the famous revolutionary quotation of Minkowski about the fact that space and time are an indissoluble union. A short explanation has also been given of the way how Minkowski treated space and time dimension alike, as if they would be of the same nature.

An analysis of the meanings of the particles for space and time dimension shows us clearly, that primitive man, thousands of years ago, had evolved words which indicate this union of space and time. Primitive man treated space and time dimension alike and he used the same word for both; and so do we.





We shall meet at 4 o'clock at the corner.

We shall meet between 4 and 5 o'clock between the houses.

Consequently we shall use the same particle symbol for both space and time dimension. For the particle at we have the symbol \rangle , derived from the symbol for position. The symbol for between could be evolved from the symbol for limits, but we have already decided on a somewhat similar symbol which may be better to the "point".

					
position	at	limits	within (between)	interjacency	between
in space and time		in space and time		in space and time	











It is clear that the next word in any sentence will make it clear whether space or time is meant; at the corner, at 4 o'clock. If we wish, we may add the symbol for space or time, as we did on page 295.

			
space	time	limit, interval	limit, interval
3 co-ordinates	outline	in space	in time
perspectively drawn	of dial		

The symbol for limit, interval is conveniently spaced, so that we can place the space or time symbol in between the two limiting lines. However, we can't do this with the symbols for position or interjacency as shown above. With these and other symbols we may place the space or time symbol just next and after the symbol in question.

There are so many synonyms in all languages that it is not surprising to find particles useable only for time or only for space. In front is used only in regard of space, as in front of the house, but we can use the synonym before for space and time, as before the house, before 4 o'clock. However, we may say six years before, or six years ago, but the particle ago can only be used for time. Other examples are: I waited from 4 to 6 o'clock, or I waited since 4 till 6 o'clock. From and to can be used for both space and time, whereas since and till can only be used for time.

Below is a short list, showing a few particles in three columns. The first indicates the particle symbol, the second the words, most in use for space, and the third column shows the most frequently used words for time. Books on synonyms may be perused for all other particle words expressed by any symbol.

<u>particle symbol</u>	<u>word for space</u>	<u>word for time</u>
	at	at
	from	from, since
	to	to, till
	near, about	near, about
	before, in front	before, ago,
	behind, after,	behind, after,
	between, within	between, within during, while
	between, within	between, within, during, while
	past (pass by)	past
	to continue (no particle in English)	still

THE VERSATILE QUESTION MARK IN A NEW POSITION

THE LITTLE QUESTION MARK

According to Bilderdijk,(28) the question mark was formed in olden times by putting the first and last letter of the Latin word Questio, meaning question on top of each other thus:

Q which was then transformed into ?

This little mark is today used in many written languages. Even the Chinese have found it much more convenient and easier to write than their complicated character for question. This international symbol is usually placed at the end of a sentence.

Now, we know, that asking a question means using also a certain intonation. We may say in ordinary pitch: "You have a fountain pen". But we vary the melody if we ask a question: "You have a fountain pen?" We may add "haven't you?" Or we may reverse the verb form, saying instead of: you have -have you? "Have you a fountain pen?"

Sometimes this inversion of the verb-pronoun tells us immediately that a question is asked, and when reading aloud, we would intonate the question melody. But sometimes we may come to the end of the sentence without realizing that it contains a question, until we see the question mark. This usually causes some embarrassment, because the sentence must be repeated with different intonation. To avoid this, the Spanish people, or at least one of them, a language planner, has done a sensible thing. They put the question mark right in the beginning of a sentence, as a very good warning, that now - a question is coming. Unfortunately, they use the question mark upside down ¿ in the beginning, and to make it doubly sure, they put it again at the end of the sentence, but now upright. This repetition is unnecessary. The upside down mark requires another type on a Spanish typewriter, again a complication. But there is some advantage in the Spanish writing:

¿ Qué hora es ? (What is the time?)

A reader (whether reading silently or aloud) knows right in the beginning that the sentence forms a question.

This is a very practical method and we shall adopt it for semantography. We shall, however, put it only in the beginning, which would be quite sufficient. We are forced to do this, in order not to alter the sequence of our sentence. In English we say: you have and in a question: have you? But there are languages in which this reversal is not practised.

We shall therefore use the same "natural" sequence of Agent - Act - Object in both cases, question or no question.

You have a fountain pen.statement

? You have a fountain pen.question

There can't be any mistake, because the foregoing sentence ends with a dot, a full stop, indicating the end of the sentence. When we place a question mark afterwards, it is clear that it belongs to the coming sentence. A little practice will make us soon familiar with this novel way of writing. We may add a colon (:). ?:You have a fountain pen.

We may even go further on this road and place the exclamation mark in the beginning. The exclamation mark was formed similarly, by placing the two letters of the Latin word Io meaning joy on top of each other, thus

I !
O

We would then write

You think it possible.statement

?:You think it possible.question

!:You think it possible.exclamation

On page 105 we have first used the question mark to form our symbols for



question
(open)



answer
(closed)

HOW TO SYMBOLIZE WHAT? WHY? WHICH? WHERE? WHEN?

the words separated,.....and.....combined into a particle

?	∧	?	∧	
what	action?	.....	how?	(<u>how</u> did you <u>make</u> it?)
?	∇	?	∇	
what	quality? (value?evaluation?).....	.....	how?	(<u>how</u> do you <u>evaluate</u> her?)
?	∇	?	∇	
what	place? .....	.....	where?	
?	⌚	?	⌚	
what	time? .....	.....	when?	
?	▷	?	▷	
what	cause? .....	.....	why?	
?	×	?	×	
what	multitude? (multiplication) .....	.....	how much? how many?	
?	÷	?	÷	
what	division? (selection from a number of things)	.....	which? (which of the many?)	

Now we can see geometrically the difference in the question

$?$ ÷ $?$ □
 Which is which?

"which" expression we may
translate into Which one of the things is what thing?

However, there is another "which", just as there is another "who". Both of these words can be used in a completely non-interrogatory (question) way.

- Who is that man?who.....interrogatory particle
(pronoun)
- Mr. Long, who came to dinner,who.....pronoun particle
- Which one do you want?which.....interrogatory particle
- The stone, which I found,which.....pronoun particle

The second "who" and "which" has nothing to do with a question. It is a pronoun, which means a "stand-in" for the noun (stand-in is a Hollywood term for a person who stands in for the actor). For means pro in Latin. Pro-noun means For-the-noun. Instead of writing

two short sentences, we can write one sentence only. However, both sentences must contain the same "star" the same noun. Then we can employ a stand-in, a pronoun. Take the two short sentences below:

Mr. Long came to dinner.

Mr. Long arrived yesterday

"Star": Mr. Long

His "stand-in": the pronoun "who"

Two sentences in one: Mr. Long, who came to dinner, arrived yesterday.

Similarly: The stone, which I found, is heavy.

Mr. Long, whose house I visited, arrived yesterday.

Now we see, that we have two different "whose": the question "whose" (whose house is this?) and the "possessive pronoun" "whose" (Mr. Long, whose house...)

But we have also two different "where":

Where is the place, where the shop is said to be? First, a question "where", then a pronoun "where"

In some other languages the question particle and the pronoun particle are expressed by the same word, like in English. But there are differences. The German question "whose" is "wessen", the "stand-in" however is "dessen". And there are whimsical particles in other languages, which are difficult to translate.

However, we can find an old international symbol to solve the difficulty. Firstly we see, that the "repetition" situation arises only when we want to combine two or more short sentences, and don't want to repeat the name, say Mr. Long, Mr. Long or the stone, the stone. Such an unwillingness to repeat the same word is quite natural and efficient men of business, whose time is money, have found a short international symbol:

5 bags of sugar
7 " " flour
9 " " coffee

The quotation mark " used underneath a word means in commercial writing, the repetition of the word above. Well, why not use this international mode of writing as a stand-in for some words? However, we shall use it not under a line to indicate the word above. We shall use it in a sentence in which the agent comes before and the stand-in afterwards.

Mr. Long, " came to dinner, arrived yesterday.

The stone, " I found, is heavy

You may say, that mistakes may occur. It may be taken as a quotation mark. This might be true with ordinary writing, but not with the widely spaced two lines in semantography. Furthermore, the " stands alone and not closely attached to the next "letter, and it stands, after a comma, and in the middle of the two lines, instead on the upper line.

top writing line ————— ” ”
ground writing line ————— , ” ”
quotation marks comma pronoun particle

If we go on writing longer and still longer sentences, we may have to use the marks for different things

Mr. Long, " arrived yesterday, entered a house, " belongs to Mr. Smith, " was absent.

But we have agreed not to use long sentences in semantography. Nevertheless, we see that the problem is quite simply solved. We may even agree, that we don't need ^{such} pronouns: Mr. Long, arriving yesterday, entered a house, belonging to Mr. Smith, being absent.

WHY AND BECAUSE, HOW AND SO, IF AND THEN, ETC.

(314) To end this chapter, we shall design a few symbols for particles, in which the question mark can be employed.

Firstly the symbol for "because". It follows usually after a "why". So we may inverse the symbol elements of question and cause. The question mark ? remains in the symbol for "because", just as it remained in the symbol for "answer".

¿▷

why?

▷¿

because

▷

cause

Similarly we may
inverse the symbols

¿^

how?

^¿

so

^

action

Similarly, when we
contemplate alter-
natives.

¿.>

if (when)

>¿

then

>

alternative

The last two particles if and then make us aware of the tricks which particles can play in the English language. There is a mix-up in which the same particle is used with different meanings.

The particle if ^{is} used solely for alternatives: If we go, then we shall take it.
However, instead of if, we may say when: When we go, then we shall take it.

But when is also used for questions: When do we go?

But when is also used for the future happenings, without indicating alternatives: To-morrow, when we go, we shall take it.

The particle then is used, as shown above for answering an alternative:

If... then we shall take it.

But it is also used for the past without any indication of an alternative.

Then, we went and took it.

And also for the future

Then, we shall go and take it.

A foreigner, starting to learn English, may curse all such somersaults and tricks, without realising that the particles of his language play similar tricks.

In semantography the meaning is cleared up. When in a question or an alternative, shows the question mark ? and the symbol for time or alternative. Then for alternatives is handled similarly.

But the symbols when and then, indicating purely time references concerning the past or future, contain no question mark, but only the past or future indicator. We learned this already on page 186.

Past)

then
when

) (

now
just

(Future

then
when

Just, as a particle, has nothing to do with justice, it means right now, the present: just arrived, just finished, etc.

THE REST OF THE BUNCH OF PARTICLES

This is the last section of this overlong chapter on the particles. The length is justified by the fact that nearly one third of all our words of speech and writing are particles.

However, the last chapter on the particles in semantography shall be written by the men of the Institute for Semantography. They will examine the particles of most languages and will discard those which are not absolutely necessary. We, speaking English do not realize that many of our particles are unnecessary. The at in at my expense makes no sense. But we can even dispense with the at, where it indicates clearly a position in space and time. We can say, and in fact we say it very often:

(without at)
instead of

We shall meet 4 o'clock corner of George and Pitt street.

We shall meet at 4 o'clock, at the corner of George and Pitt street.

We see that the particle at is wholly unnecessary, and there might be languages, which have no particle for position indicating at. A native, reared in such language, would never feel the necessity to write: We shall meet at 4 o'clock. If he is able to read semantography and happens to come across a piece of semantography written by an English semantographist, he would recognize the small symbol as indicating position and will fully understand what the English meant. The same will be true vice versa. That native will write in semantography: We shall meet 4 o'clock, without at, and the English semantographist will have no difficulty to guess the context, even when the small (or big) symbol for position is absent.

So we must accustom ourselves to the fact, that a lot of particles are unnecessary, and now, the English reader is "in" for a heavy shock, because we have to face the assertion that the so-called articles a and the are unnecessary.

There is even a greater shock for the reader in store: the beloved particles any and some (the nightmare of foreigners) are equally unnecessary.

What is the significance of the article a ? It signifies one with lesser stress.
one house is similar to a house.

What is the significance of the particle the ? It signifies this with lesser stress.
the house is similar to this house.




There is only a slight shade of stress in both meanings, and we should not be surprised that Slav languages have not the particle the ^{and/a} in those languages, the nouns are used without an article: Father works, house is nice, man is cruel. If these languages contain an article it is this : this father works, this house is nice, this man is cruel.



Now, we shall devise a symbol to indicate the articles a and the; readers of semantography, whose languages do not contain a and the will graciously agree that these particles are designed only to help those semantographists, who are accustomed to a and the. No translation is necessary.



We may use the symbols below to evolve the symbols for this and that.

			
a	the	this!	that!

These are convenient symbols for this and that. They are evolved from the symbol for the and the stress is indicated by transforming them into an oblique exclamation mark: this! and that!.



However, it is simple to evolve the symbols for these particles from a "bigger" meaning. We could use the symbol for hand horizontally thus:  which looks in outline similar to a hand with outstretched index-finger:  an international symbol already recognized all over the world, meaning: to point and  also meaning this way to the exit, etc.

We may agree that the symbol for hand, horizontally placed, should indicate to point, to indicate, and a smaller symbol should indicate this  and that .

Although such particle symbols would be more consistent with our methods of evolving particle symbols, I would prefer the symbols this  and that  because they look similar to the symbol for the and would be helpful in the correspondence between writers of Teutonic and Latin languages (accustomed to the article the) and writers of Slav languages (not accustomed to the, but to this).

As said before, the last word in these matter will be spoken by the men of the Institute in accordance with a plebiscite of all members of the Society of Semantography. More about this in the last chapter.

There is another particle in the English language, which seems non-sensical to people of other languages, the particle there. If it/used to indicate a different position to here, as here and there, well and good, but it is mostly used to begin a sentence: There is, there must, there ought to, etc. etc.

We have already evolved the symbols for here  and there  from the symbol for position. They should be used when a position is meant. If a good boy stands there, fifty yards away, we may say: "There is a good boy." But when the good boy stands where we are, that is here, and we pat his head, it's non-sensical to say: "There is a good boy".

Well, to tender to that weakness of English speaking people, we may agree that they should use the symbols, but (if the boy is not ~~in~~ another spot) they should write in semanto-

HERE AND THERE, ANY AND SOME, AND SOME MORE

graphy: >.. is a good boy (the boy is here) and .. < is a good boy (when the boy is not here)
 Here There
 >.. in England is... (when the writer is in England)
 Here
 .. < in England is... (when the writer is not in England)
 There
 But >.. in England, .. < is.. means a non-sensical expression, to be avoided
 Here there in semantography.

A little exercise will soon acquaint the writer in semantography with these notions, clearly differentiated in opposite geometrical lines.

Now to the "sacred" meanings of any and some. There is that nicety of educated speech, when and where to use any, and when and where only some is permitted. If you enter a house and think it is deserted, you will call: "Anybody there?" However, if you hear a sound in the house, you must call: "Somebody there?"

But the simple "uneducated" people don't adhere to this grammatical rule, many of them don't even know about it. They call: "Hey, there?" or use any and some indiscriminately.

A short analysis will soon convince us that the particles any and some are unnecessary in most cases. What do they mean?

Let us take the sentences "Have you any bread?" "Have you some bread?"

Let us discard the slight difference in shade between any and some. If you don't believe that the person has bread, then you say any. Otherwise you say some.

In both cases, the particles any and some mean a bit, a piece, or a little, few. If you call: "Is anybody there?" you think, there might be a few people, or at least one, one piece of people, a bit of people. So we may realize that this particle any or some, indicates a division. In fact, the name "division article" is used, for in French to denote a similar French particle:

"Avez-vous du pain?" "Have you any bread?"
some

Is this particle necessary? No! We could easily say:

"Avez-vous pain?" "Have you bread?" "A person there?"

We can, of course, easily develop the particle symbol.

÷	□	÷	but we may also use the opposite of	×	1x
÷	÷	÷		many	few, little (the opposite of multiplication)
division	part piece, bit	any some			

If an English writer uses the symbols to indicate any or some, the reader, not accustomed to such particles will translate in his language

"Have you a piece of bread?" "Have you a little bread?"
a bit few (pieces of)
a part

And in regard of the "pieces of bodies" inside a house, this is exactly what a Chinese boy announces to his master, when two ladies are waiting for him inside the house:

"Two pieces ladies inside!"

In Chinese writing we don't need this particle, because the characters show clearly what is meant, a person, an animal, furniture, food, etc. etc. But in Chinese speech it is very necessary, because all words in Chinese are monosyllabic, and there are thousands and thousands of homophones, words which sounds alike. There are fifty different meanings of the word li. To indicate ^{kind of} li is meant, the Chinese put the word for piece before it: ja li, or se li, or who li, or yuan li and all these different words mean either a piece of furniture, a piece of food, a piece of people, etc. etc. They are called classifiers. A Chinese says a piece of furniture, a table, a piece of animal, a pig, a piece of lady.

Their monosyllabic speech has forced them to add an additional symbol, usually a classifier, otherwise a listener would not know what li (itself) means. But for writing and reading alone, (just as in semantography) the additional symbol is unnecessary.

The symbol for the indefinite article a \ may furnish us with similar meanings. A thing, is not one thing, not the thing, and not this thing. It is just a thing, any thing.

a (any)	anything, whatever, whatsoever	anywhere wherever	any time whenever	any one anybody	any other (but <u>another</u> means a second one; 2.)

Other particle symbols have been evolved in former chapters. If we wish, we may minimize the size, or use them as they are, or use another convenient symbol.

		or				
full (full bowl)	well thorough		well much	near (see p.150)	equal (mathematical)	as, like (see near equal p.199)

The particle well can be translated differently and with different symbols. The bowl is well filled. I am well fed up. He did it well. The last well could be expressed by the symbol for good (mind and plus, see p.179)

The symbol for than must be evolved from the symbol for to compare, in comparison. He is bigger than you, can be written: He is bigger in comparison with (or compared with) you. We have to recall the symbol for measure, scale (p.150) and the mathematical relation symbol.

scale (ruler)	to measure measurement	relation (mathematical)	to compare (to measure & relate)	than (in comparison with)

Two particles which are very often used in any language are those equivalent to the English that and but.

To depict that we could use the colon (:): two dots one above the other. It's an international symbol.

a sentence with that He said that I could go ahead with the work
with colon : He said : I could go ahead with the work.

The colon should be used for such sentences written in semantography. However, the colon might be a little awkward in sentences like

I am afraid that he won't go to work.
I am afraid : he won't go to work.

The meaning is exactly the same. However, readers accustomed to a fluent sentence, might prefer a particle symbol to avoid the stoppage, caused by the colon.

We can compose such a symbol, which indicates somewhat a halt and afterwards a free flow. And we can likewise compose a similar symbol for but, which indicates a halt after a free flow.

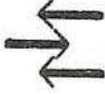




that	but, how-ever
I think he should come	he may think differently.
that	but

"I would gladly do it but" somehow the flow of our speech and thought is stopped and this is clearly depicted by the horizontal flowing line, being suddenly stopped by the vertical line . In a similar way, when we employ the particle that it is as if we have thought a while, stopping in our speech and then continuing the flow

After careful consideration I think and I believe

(318)

We could, of course, evolve the symbol for but from a different assumption. The particle but is only an indication of some counter forces which have to be taken into account. On page 93 we have depicted counterforces by two arrows pointing backwards, and we have depicted courage and spite by showing an opposing single arrow, pointing in a forward direction. This gives us the meaning of the particle cluster in spite of and others. As there is some space left, we shall depict also the particle across. We may use the big symbol with a dot on top (see p. 294) or draw a smaller and simpler symbol.

				or	
spite (one arrow against two)	in spite of though, although notwithstanding nevertheless	crossing (see p. 361)	across		across

The particle symbol showing three arrow heads is a marvel of simplicity, compared with the nonsense contained in the particle cluster

not-with-standing
never-the-less

But the similar meaning in other languages contain a similar nonsensical word cluster.

In French néan-moins.....verbally.....nothing-less
néanmoins can be replaced by toute-foisverbally.....all-times

But nothing-less and all-times cannot mean the same. Yet they do.

In German nichts-desto-weniger...verbally.....nothing-the-less
nichts-desto-trotz....verbally.....nothing-the-spite.

And so we come to an end of this chapter about the most irregular and most whimsical words in any language, which "how-ever" we love "ever-so-much" the particles.

This chapter titled "Anarchy in Language" is the longest in the whole book and it extends over 30 pages. It has been the most difficult to write, and the struggle with the particle symbols has taken up more than 6 of my years. In fact, only after 5 years did I arrive at something which looked like a system, and even right now, when writing the chapter, I am altering and re-constructing.

As said before, the Institute for Semantography may have the last word, after a thorough survey of the particles in other languages. Somehow I believe, that: Should the idea of semantography fail completely, this analysis may prove fruitful for the mastering of the most difficult and whimsical words in any language, comprising about one third of all the words we speak, write and read.

I hope, the struggle will be worth while. At the same time, I hope that the critical reader will realize that this is the most difficult problem in any and in all languages, and consequently in language learning and translation.

The critics may say that I have taken only European languages into account. They have particles which are completely absent in African or Asian languages. On the other hand, those other languages have particles absent in European tongues.

This is true enough and I confess my ignorance of African and Asian languages, except a bit of Chinese. But I believe that my method to refer any particle to its bigger meaning, must be applicable to any language. All languages contain a word with the meaning of question, also with the meaning of place and time. Primitive languages may not have a particle for where? and when? but the symbol of the question mark (?) and the symbol for earth (a line) and time (a dial) will tell in any language what is meant. Of course, those natives must be taught the meaning of the question mark, and if they had never seen a watch, the meaning of a dial will be totally lost to them. On the other hand, semantography is intended primarily for communication between people interested in communication. The pygmies in Central Africa may not be interested, but even they have mission schools.

Critics may say, that millions of literate people of every nation have not the slightest idea of the meaning of cause and effect. True enough. Then we have better teach them. Even the most primitive language contains a why? and a because. And at present, all sorts of people intended to foster their own ends, increase the confusion about the why? and because. The peace of the world depends directly and ultimately on the interpretation of these little particles.

BOTANICS, ZOOLOGY AND GASTRONOMY
FOR AN INTERNATIONAL MENU - CARD.

Some **symbols** already used in Biology and Botany:

female (Venus)	male (Mars)	male individual	female	an annual plant (various sun outlines)		monocarpous pere- nial plant	
evergreen plant	left winding	right winding	northern hemisphere	southern hemisphere	old world	new world	actino- morphic
occurrence of a particular trait	absence	section of species	herb perennial	tree or shrub	shrub	tree	

"Origins. The symbols which are not letters, punctuation marks, or mathematical signs, are sometimes schematic pictures of the thing or phenomenon symbolized: as) turning to the left; Δ an evergreen plant, probably either from the frequent conical shape of such plant or from the roughly triangular cross section of some pine needles. Others have been adopted chiefly from astronomy; as $\text{\textcircled{V}}$ female, from Venus looking glass; $\text{\textcircled{M}}$ male, the shield and spear of Mars (or perhaps his helmet and plume); $\text{\textcircled{S}}$ or $\text{\textcircled{☀}}$ an annual plant, the sun."

Webster's New International Dictionary (28)

Botanists and zoologists have partly solved the problem of international communication. One of their fraternity, the great Linné proposed in 1753 his *Species Plantarum*, a Latin nomenclature for botanics, and in 1758 his *System Naturae* for zoology. He gave the lead, but it took more than 150 years until the botanists and zoologists agreed upon them for international purposes. The International Code of Botanic nomenclature was accepted in 1905 at the congress in Vienna and revised at the congress in Cambridge in 1930. The International Code of Zoological Nomenclature was accepted at the congress in Berlin in 1904. Today, botanical and zoological gardens all over the world carry the same names on thousands of name plates.

These two nomenclatures gave the scientists international names for all flora and fauna. However, with Latin as a spoken and written language discarded, they are still at a loss to correspond with each other, should the one speak only Swedish and the other only Portuguese.

We should therefore not be surprised to learn that they too, have evolved international symbols, readable in any language. They draw up Mendelian inheritance diagrams and other diagrams and prefer symbols. The ones shown above are taken from the list in Webster's New International Dictionary (28) where altogether about 25 symbols and about 30 combination of them are shown. Some of them are wholly arbitrary, as those for tree and shrub. Some show mathematical signs, plus and minus. The question mark (?) and the exclamation mark (!) is also used. Some use the dividing line (see above), and some are outlines, as $\text{\textcircled{V}}$ the hand mirror of Venus for female. All this tends to show, that there is a trend in these sciences towards international symbols.

However, the samples above show that they did not yet come to an agreement about their symbols. The circle $\text{\textcircled{S}}$ is used for all kinds of meaning (foremost however, it indicates the sun). They have also two and more different symbols, having the same meaning.

These symbols may be useful in diagrams, but they are wholly insufficient for a report written in symbols only. The suggestion is therefore made, that semantography may prove useful for scientific reports on botanical and zoological matters. As already pointed out on page 65 in the chapter "Scientific Reports in Semantography" and on page 108 in the chapter "Symbol Writing for the Farmer", this system of semantography could be used for co-ordinated reports and instructions for all agricultural, botanical and zoological stations all over the globe. Every conscientious farmer and breeder is a research worker, ready to listen to new methods, ready to read about new ideas, ready to follow any instruction given by the research stations. The language barrier and the fact, that farmers are illiterate in many countries, seems to present an unsurmountable obstacle. Yet, as shown in the chapter dedicated to the farmer, he would not have much difficulty to learn the meanings of some symbols, which as has been proved, are simply the outlines of the real things. And let's not forget: the peace of the world depends on the production of food.

Scientists may use the Latin names for the various botanical and zoological species and they may use the semantographic symbols as the "mortar" to form sentences with the Latin names. Would this be sufficient for future research? It would not.

Take for instance the insects. We know, that insects do every year damage to crops, a damage greater than all the damage caused by rain, hail, flood, etc. etc. The knowledge about the insects is therefore of paramount importance to mankind. How many species of insects have already been recognized, classified and named (apart from studying them)?

According to Webster (28) about 475,000 different species are known to science. This is a terrific number and indicates an even more terrific classifying job. Well, are all insect species classified and named? No! The above great number comprises only 5 percent of all the insect species, which according to an conservative estimate amount to at least 10,000,000 different species. We may realize that Latin names may prove wholly insufficient to name them. Sooner or later, the scientists would have to use mathematical numbers for the classes and subclasses for insects alone, let alone all the other millions of botanical and zoological species.

We have a simple precedent. Hundreds of years ago, every house in the small towns was known only by its name. Even today, in some countries, as for instance in Australia, every house, big or small, has its own name Mayfair, Astor, Bellevue, Hillcrest, etc. etc. all duly registered in the land registers. But, along with the names, every house has a number. Today all houses in towns have numbers. Streets have still names, but not more, in the big cities of America, where it would be too much of a nuisance. The division of streets and avenues according to numbers, was simply forced upon the citizen as the only way out; and by the way, a good way out, because if you stand on 10th Avenue, you know exactly where 12th Avenue is, etc.


Latin names for botanical and zoological species are formed according to a special system. Nevertheless, I believe that mathematical numbers will have to be applied sooner or later, and I hope, with some international symbols drawn from the system of semantography. In any case, this is the idea I am now going to apply for an international menu card, and, in the next chapter, to the farmers needs.

Why would an international menu card be a boon to travellers? Only travellers can appreciate the necessity of such an instrument. Only travellers know what it means to be forced to eat in foreign restaurants and to suffer accordingly, if they don't know what the names on the card mean. Most people know exactly what they like and what they dislike. Many people are allergic to certain foods, which make them virtually sick, even produce skin irritation when only looking at the particular food.





The necessity to understand the names on foreign menu cards has been clearly recognized by the linguists, who published little dictionaries and guides for travellers. In many of these guides the names of dishes are to be found in the very first chapters. Yes, an international menu card written in international symbols, readable and understandable ^{in any language} would be a good thing. No doubt, the international organisations of hotels and restaurants would make use of it, would issue little leaflets with columns in different languages, which would help the traveller not in ^{one} particular country, but in any country. A dish, which is a national speciality, oddly spiced, may be marked by a special symbol. The traveller, who orders such a dish, goes deliberately into an adventure. But most travellers prefer to know what they are going to get. They may like chicken, but dislike goose. They may want it roasted, but would dislike to have it cooked only.





So let us arrange the kind of fowl usually served in international ^{of} restaurants. For convenience sake let us prepare a list, and number each sort. We may ^{be} surprised that we would need only a few numbers, usually not more than 10, but in most cases, the numbers 1, 2, 3, and sometimes 4 would be sufficient. Let it be understood, that the final list will be drawn up in co-operation with the international hotel and restaurant organisations.

symbol list of birds usually served in international restaurants.

 bird nr.2 a goose	(1) fowl(chicken)	(6) pheasant
	(2) goose	(7) peacock
	(3) duck	(8) pigeon
	(4) turkey	(9) partridge
	(5) grouse	(10) quail.

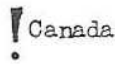

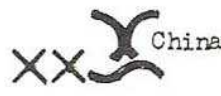

Some readers may say that they have never eaten all ten species. As far as I am concerned I have never eaten a peacock, pigeon, partridge, and quail. For me the numbers 1 - 6 will serve (and I travelled to many countries) I like especially duck, and I would quickly remember that nr.3 means duck. But we do not even need so many numbers. We may add a second symbol to indicate an underclass. The symbol for a roof should indicate a domesticated bird, the symbol for water should indicate a bird usually found on and over water, like a wild duck. If we add the symbol for roof, we get a domesticated duck, for which the farmer usually provides a little pond; and so on in the list.

symbol:					
outline:	roof	wave	tree	much, much wave	triangle
significance:	domesticated	water on ground, pond, etc.	forest	sea, ocean	mountain

			
bird domesticated (roof)	bird on water	bird on water & under roof	bird of forest
(1) chicken	(1) wild duck	(1) duck	(1) grouse
(2) turkey	(2) wild goose	(2) goose	(2) pheasant
(3) peacock			(3) partridge
(4) pigeon			(4) quail

For practical purposes we may even dispose of the numbers, because most bird dishes served are only of the variety: chicken-duck-geese, and we may allot them the three symbols shown above. The other birds are of little culinary importance. Should you mix up a partridge with a quail, when ordering, the damage would not be great. Be sure that any gourmet would easily distinguish between the numbers 3 and 4.

But we could depict further delicacies with other simple symbols and we may even add the name of the country, from which a speciality is coming. If the preparation and the spicing is not the usual one, we may add an exclamation mark (!) to indicate that a surprise is in store for the guest. It might herald an exclamation of joy or dismay. In any case, it would be a warning.

			
exclamation mark indic. a speciality dish of Canada	Canadian water bird speciality	sea bird of China	mountain bird of Chile

A thoughtful owner of restaurants might even add another symbol to indicate: that sea bird speciality of the China sea tastes like duck or pigeon, (symbol for like near, equal, see on page 317). Or he can easily indicate whether the preparation is sour, sharp on the tongue (taste symbol on page 157 plus knife, symbol for sharp, sour) or the opposite, namely sweet. The guest would thus know, what he's in for. Once forewarned, he may enjoy the adventure.

DEVISING SYMBOLS FOR AN INTERNATIONAL MENU CARD

From the birds we may proceed to animal meat. The symbols for those animals, which provide meat, we shall learn in the next chapter, dealing with the farmers livestock. But we may realize that only very few animals are used for that purpose.

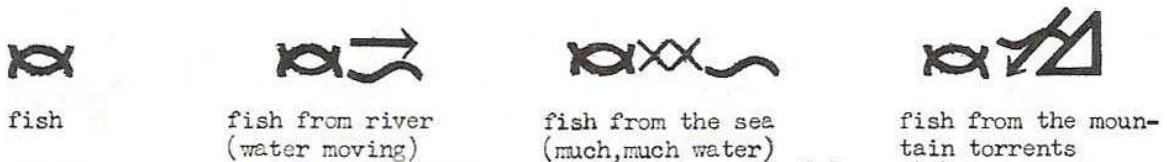
<u>number</u>	<u>animal</u>	<u>term for meat</u>	<u>term for young</u>
(1)	cattle	beef	veal
(2)	sheep	mutton	lamb
(3)	pig	pork	

How various parts of animal bodies can simply be depicted, will be shown later.

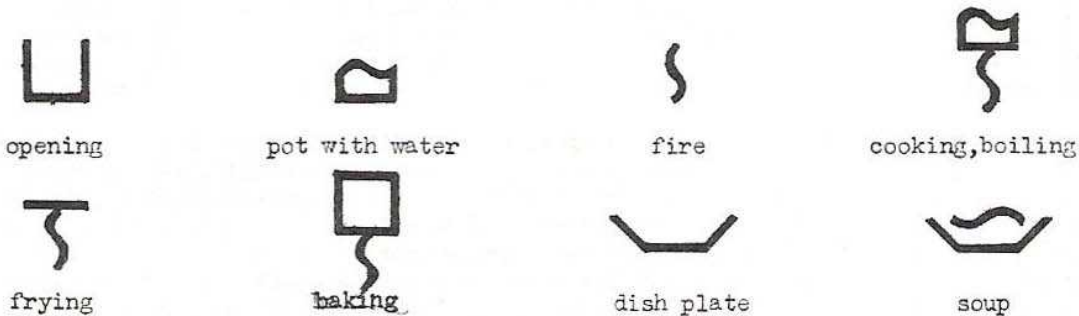
In most cases meat dishes consist of either beef or pork. The knowledge of these two numbers together with the symbol for young (see p. 274) will suffice for most travellers. We may add a few other animals, like rabbit, etc. We may make a list of wild animals living in the forest (tree symbol), but again a few numbers will suffice. Then we can depict animals from the mountains of India, the polar sea off Greenland, etc., etc. Thoughtful owners of restaurants may add: taste like pork or the like, for any of those strange speciality dishes.

With fish it may be a bit difficult. There are very many varieties of fish and it would not seem wise to run up figures to the number 50 or more. On the other hand, most fish meat taste alike, and the difference is made up by different preparations.

We could form a symbol for fish, consisting only of symbol elements: living being in water. We may add the symbol for long, to indicate that fish is meant, which usually is an elongated creature, contrary to shells, crabs, etc. However, it might be advisable to invent an auxiliary symbol, looking somehow like a fish and being easily typable on our typewriter. Then we may add another symbol.



Again, there are some standard fish which we may number, like (1) carp, (2) trout, etc. Now we may form the symbols for the different ways of preparation in the kitchen.



The designing of symbols for special preparations may be safely left to the committee of the international hotel and restaurant organisations, which - so I hope - will one day be set up to draw up a list of symbols for the international menu card. They won't encounter much difficulty. Steaming, for instance can be easily depicted with the arrow pointing upwards from the water symbol. Vegetables, for instances, are very often steamed. And this brings us to the symbols for the vegetables, fruits and plants in general.

It can easily be shown that all necessary symbols can be drawn up from the symbol elements, sometimes, of course, using a round-about way. But it is even simpler to draw up an auxiliary symbol, as we did with the symbol for dish plate. With the symbol elements it can be symbolized as a circular, flat plate, but the outline of a dish plate, as shown above, will be easily recognized, even by children. It's self-explanatory.

A shrub, can be depicted as a small tree. But we can make the tree symbol small.



symbol elements combined

auxiliary symbol

numbered eatable varieties



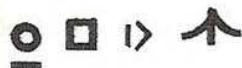
tree fruit
food thing from tree
(food = mouth, earth)



fruit

- (1) apple
- (2) pear
- (3) peach
- (4) apricot
- (5) plum
- (6) orange
- (7) lemon
- (8) cherry

(specialities, see below)



berry
food thing from shrub



berry

- (1) strawberries
- (2) raspberries
- (3) gooseberries
- (4) blackberries



vegetable
food flower above ground



vegetable
above ground

- (1) tomato
- (2) beans
- (3) peas
- (4) asparagus
- (5) cucumber
- (6) melon
- (7) pumpkin



vegetable
food flower below ground



vegetable
below ground

- (1) potato
- (2) radish
- (3) carrot
- (4) onion
- (5) turnip
- (6) celery

The auxiliary symbols are very simple. There are only a few numbers to each symbol, easily to remember. After all, we are eating those few varieties all our life, every day. But if people should complain that varieties up to the number of say 7 are too many, we can easily invent another symbol, or add a symbol as a subclass indication, as for instance:



grass



food grass

or



vegetable
consisting mostly of
leaves

- (1) cabbage
- (2) spinach
- (3) cauliflower
- (4) lettuce



berry

plus



plus stick, line



berry grown
on sticks

- (1) grapes (for wine)
 - (2) hop (for beer)
- (see symbols for beverages)

Other symbols can be easily invented.



capsuled legumes
beans, peas, etc.



roots



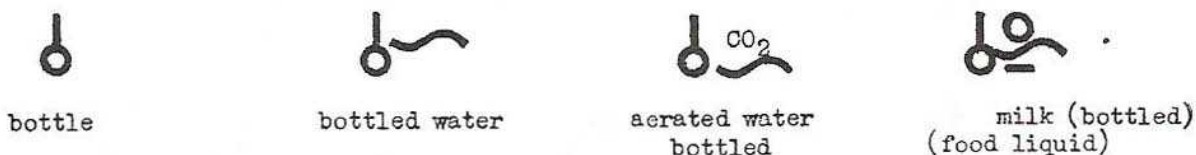
mushrooms



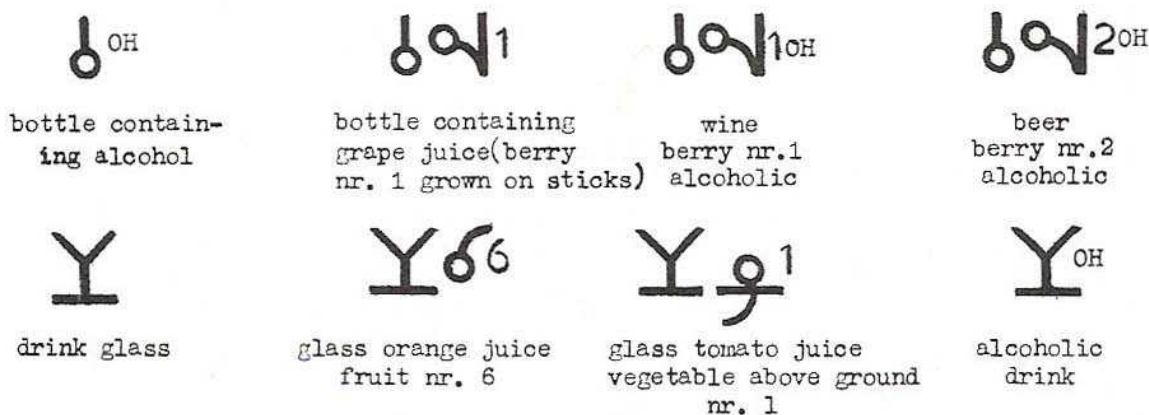
grain
(see below)

As done in the case of the symbols for birds, we may add the name of a country and the exclamation mark for speciality. The different grains (wheat, barley, oat, rye, corn, rice etc.) can be numbered or differently drawn. Rice for instance, could be depicted by the two stalks grown out of the water line. Orange, lemon, grapefruit could be subclassed by adding the symbol for sun (indicating hot climate fruit). It would be easy enough.

From the symbol for orange we can easily advance to the symbol for orange liquid, called orange juice, which would lead us to the symbols for soft drinks and "otherwise," which means those, containing alcohol. We have already an international symbol for that stuff, known to any school boy and girl, namely the chemical formula $C_2H_5.OH$. We shall only use that part, which is recognized by every ^{organic}chemist to mean alcohol in general, namely the radical OH. Another formula CO_2 is today recognized by almost anybody, meaning carbondioxyd, the stuff contained in aerated water.



Milk may be denoted by adding the symbol for food (usually unnecessary on a menu card, devoted wholly to a list of foods). Milk, no one doubts, is the liquid food par excellence. It was, is and will be the "primary" food of humanity, in every sense of the word. But, alas, man learned to prepare other liquids, which contain the alcohol group OH. In small portions it gave and still gives him an elated feeling. But, as the great physician August Forel pointed out: all the wars, all the plagues, epidemics, diseases, all the earthquakes, and other fatalities, which have beset mankind, all of them combined have not caused so much misery, destruction and death than that little devil alcohol. But we have to take it into account. Let's draw the symbols for wine (from grapes) and for grape juice.







The terms whisky, brandy, rum, gin, cornac, and other drinks are international anyway. So are other terms like coffee, tea, chocolate, cocoa. No numbered symbols are necessary for them. But we should have simple symbols for sweet, sour, bitter.





On page 157 we have drawn the symbol for taste consisting of the symbol elements of mouth, earth (indicating food) and nose, because we can taste things only with mouth and nose. Enjoyable taste we have depicted on page 157 by adding the symbols of the uplifted heart. To indicate sweet, we shall agree on a short cut, remembering what food made us happiest in our childhood.








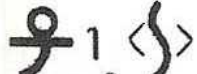



















We can use the symbol for sour, combined with wine to indicate vinegar. But the formula CH_3COOH will serve just as well. Why forget what we all learned in school? A symbol for salt is easy to draw, but NaCl is already an internationally recognized symbol for it. Bread can be symbolized from the symbol for wheat (two stalks, see foregoing page) and the symbol for baked (two pages before). But it would be simpler to invent a special outline symbol. Cheese is solidified milk but an outline symbol will serve better.






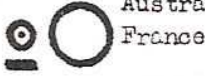

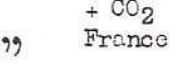

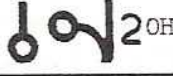

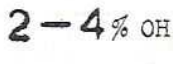

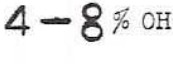












 ice solidified water)
  ice-cream (sweet ice food)
  cheese auxiliary outline symbols instead of solidified milk
  bread instead of baked grain

For the drawing-up of a menu card we need the symbol for meat, which we shall design as an eatable (food) portion (division) of an animal (quadruped) in contrast to man (biped)

 man biped
  animal quadruped
  part division of animal
  meat food part of animal

 INTERNATIONAL MENU - CARD			
 SOUPS	\$	 FOWL	\$
 , X vegetable, varied		#1  chicken, baked	
 3 peas		#2  turkey, cooked	
 1, < > tomato, hot		 MEAT	
 1, 1 tomato, cold		#2  roast-beef	
 2 beef tea		"  " veal, roasted	
 FISH		#3 " " lamb, roasted	
#1  carp, cooked		#4,  minced pork, baked	
"  " fried		 VEGETABLE	
#3  trout, baked		 1 potatoes	
#7  Canada 1 Canadian salmon, cold		 4 asparagus	
#9  Portugal  Portuguese sardines in oil		 2 spinach	

THESE FOOD SYMBOLS WILL BE LISTED IN TRAVEL BOOKS

	SALADS	\$		WINES	\$
	potato			red wines of Australia and France (Burgundy, etc.)	
	cucumber			white wines of Australia and France (Muscatel, etc.)	
	lettuce			Champagne	
	mixed variety			BEER	
	SWEETS			light beer with 2-4% alcohol, Ale, Pilsener, etc.	
	various cakes			strong beer with 5-8% alcohol, Port Stout, etc.	
	ice-cream chocolate			DRINKS	
	" " strawberry			variety of Whisky, Brandy, Rum, Gin, Cocktails	
	CHEESE			SOFT DRINKS	
	Camembert Gorgonzola Roquefort Emmenthal			aerated water	
	FRUIT			orange juice	
	fruits of the season (autumn) and Californian specialities			lemon juice specialities Coca-Cola Schweppes, etc.	

When perusing the above list as to its practicability, 3 points must be kept in mind:

- (1) The symbols drawn in this list and in this whole duplicated manuscript are greatly exaggerated in size, in order to impress the casual reader with the simplicity of the symbols. This simplicity would not be so obvious, if the symbols would be shown as they are to be printed, namely much smaller, a little bigger than capital letters. In practice, the column containing the symbols would be insignificantly smaller.
- (2) The natives of places with small restaurants would not be bothered with the symbol column. In fact, it may be left out completely. Should a stranger stray in such a restaurant, unable to speak a single word, the waiter may have a little leaflet ready showing the symbols and columns with the words in different languages.
- (3) Big restaurants in international cities may print a little leaflet, which would be treasured by any traveller as a guide for other restaurants in other countries. Today, travellers have to peruse their little pocket dictionaries.

ANIMALS AND PESTS
AROUND THE FARMHOUSE

"The peasants already have certain almanacs, telling them without words much that they ask."




Gottfried Wilhelm Leibnitz (7)

"I believe that this universal language is possible...by means of which the peasants could better judge the truth of things than do the philosophers at the present time."

Rene Descartes (4)





The symbols we have designed in the chapter on the international menu card can be used for agricultural reports, which any farmer could read in his own language. Even if he should not have acquired the knowledge of the symbols, the village elder or someone in the village, clever enough, to learn the symbols would be able to translate them, even if there is no written system and alphabet evolved for their special language. The reader is kindly asked to peruse the chapter on "Symbol Writing for the Farmer" on p.108


We have already evolved the symbol for an animal, as a quadruped, a being with four legs and a horizontally adjusted body, in contrast with the biped man, with a vertically adjusted body. The symbol for a domesticated animal, could be easily formed by adding the symbol for domos which means house. We may furthermore distinguish between animals, for which a house is provided, and animals which usually live beneath a house, and undermine it. These animals we usually call pests.


		or simply		Nr. 2 cattle	(1) horse (2) cattle (3) sheep (4) pig (5) goat (6) dog (7) male (8) ass	(9) cat (10) rabbit
animal (four legs)	domesticated animal (house provided)		animal domesticated			

We see that our numbers do not ^{over}reach 10, But even if agricultural scientists should decide that we should simplify our symbols, in order to have them easier recognized by the illiterate farmer, we could easily draw up auxiliary symbols.

auxiliary symbols

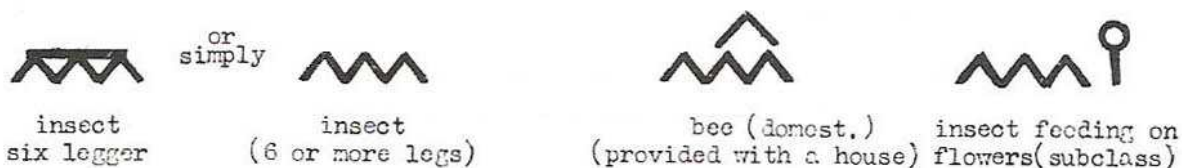
			
(1) horse (2) mule (3) ass	(1) cow, cattle (2) sheep (3) goat	(1) dog (2) cat	(1) pig

Numbers up to 3 are easy to hold in the memory. We may even vary the auxiliary symbols to get greater variety. A rabbit may be indicated by the long ears . The above symbols are almost self-explanatory. The horse recognizable by its long neck and head; cattle, sheep and goats by the horns; dog and cat by the long tail; pig by the fat hump.

The sex, and age (young: griffin, calf, lamb, etc.) are easily symbolized. Young  (s.p. 274)

					
male for human beings	female	male	female	<u>bull</u> cattle, male	<u>ox</u> minus sex, castrated

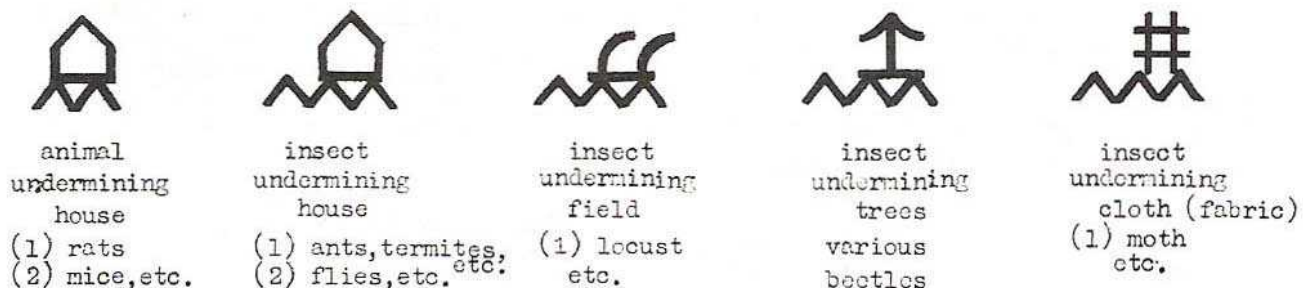
Having defined and symbolized an animal as a four-legger, we may go on with this classification and symbolize an insect as a six-legger. In fact, most insects have six legs. If we want to indicate an insect with 8 legs, we may write in symbols: with 8 legs. But make sure about the centiped (100) and the correct number of legs of the milliped (1000)



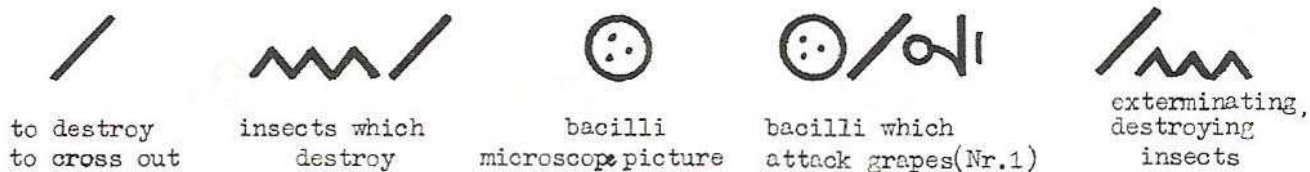
The reader is kindly asked to peruse the chapter on zoology (p.319) where it is outlined that entomologists (scientists on insects) may soon be with their Latin at and end, and may have to employ mathematical numbers. At present they have only named not more than about 5% of all the existing species of insects, of which more than 10,000,000 different species exist (28). Symbols indicating a certain characteristic outline might be helpful for further classification.

The farmer has only a limited number of insects to reckon with, and if a strange guest should appear from a far away country, the farmer will soon be forced to learn his name, as it is the case with the Colorado beetle for instance. The word Colorado is international, because it is a name of a certain locality. In other cases, the Latin name is used for general recognition.

Such insects are also called pests. They "undermine" other things, and this undermining can easily be depicted.



Bugs, lice and fleas can be depicted as "undermining" man and animal. Underclasses can be outlined as for instance the bed-bug, showing the outline of a bed, which would indicate "everything". Should, however, such vivid symbols be considered too elaborate, we can easily find other symbols. The possibilities of expression are not limited in semantography. We can depict pests, as animals or insects destroying (resp. attacking) man, animals, plants, grain, trees, fabric, etc.



The reversal of the symbols insects destroying (insects which destroy) and destroying insects (exterminating them) is clear enough to show what is meant. From these symbols we can develop the symbols for an insecticide, a chemical destroyer of insects.



A complete sample for directions for an insecticide will be given on the next page. In the remaining few lines on this page we shall try to evolve special symbols for a snake, earthworm, snail, spider, butterfly, etc. Again it should be understood that we are able to express (by some circum-locution) any meaning with our symbol elements. A snake is a living being, elongated, without legs. An earth worm is in form like a snake, but lives underground (below earth line). But an outline symbol is easily drawn and easily recognized.

The ultimate decision about such outline auxiliary symbols should rest with the Institute for Semantography, which would discuss the matter with research workers of agriculture, entomologists, zoologists and botanists.

SAMPLE DIRECTIONS IN SYMBOLS FOR AN INSECTICIDE

461
(329)

auxiliary symbols



snake



earth worm
(under earth)



snail



spider



butterfly

INSECTICIDE					
chemical destroyer of insects.					
: against insects destroying crops.					
	1	÷		+	50
mix	1	part	chemical liquid	with	50
		>		1	
Spray in fine droplets	at	roots	.	1	liter
to	100	square meter	.	Beware	poison

As said in other parts of this typewritten manuscript, the above symbols are drawn exaggeratedly large, in order to impress their simplicity on the casual reader. In ordinary printing the symbols should not be much bigger than the capital letters.

If manufacturers of agricultural products for the farmer would print the directions for use in the required language plus lines in semantography as shown above (the words beneath each appropriate symbol) then the farmers may grasp the meaning of the symbols easily (at least those showing an outline) & a little interest / few questions to a fellow farmer or the travelling agriculture lecturer would acquaint him with the meaning of all the necessary symbols. And if he should find some difficulty, his boy may be able to give him the necessary information from what he learned with the boy scouts and (may be) in school.

Footnote: The number 1 is left out in a chemical formula, f.i. CO (against CO₂). Similarly we don't need the number 1 in the symbols for horse, cattle, dog, bee, rat, ants, moth, etc.

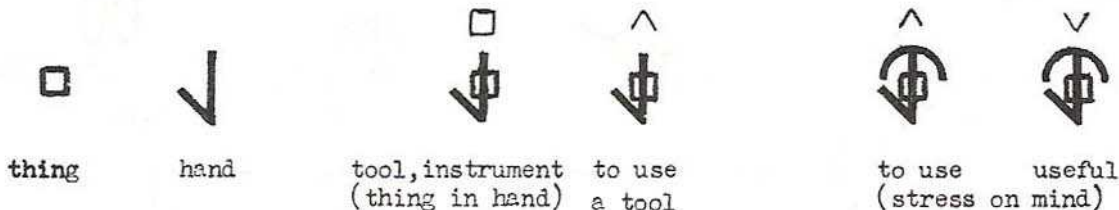
TOOLS AROUND THE HOUSE

"Tool. Any implement or object used in performing an operation or carrying on work of any kind... tool has been held to designate books, a horse and wagon, a piano, a hand or foot-power printing press, a sewing machine, a floating pile driver and its scow, etc.."

Webster's New international Dictionary (28)

We have evolved in previous chapters the symbol for tool and use, useful, usage. We have depicted the most primitive ^{which} primitive man invented in the bygone ages: a thing, a stone in his hand. Chimpanzees are clever enough to use such a tool.

In adding the mind symbol we get the symbol for use, to use, the adjective useful and the adjectival noun usefulness. The use and the usage are the verbal nouns of the verb to use.



We are now able to form the symbol for any tool, by placing the tool symbol in front of (and expressing the work of the tool by) some additional symbol. For instance

tool-to open = key

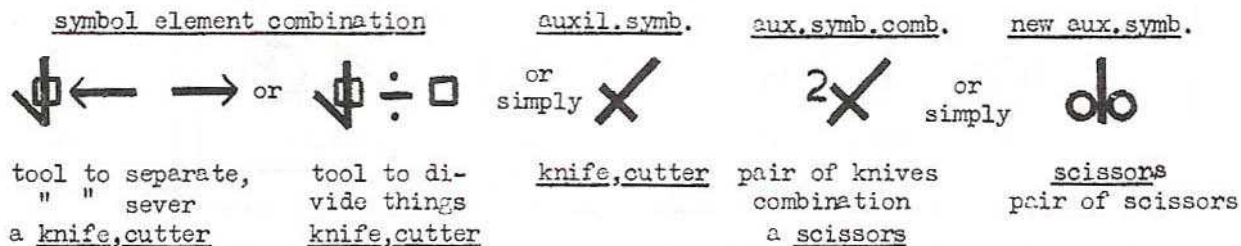
We must therefore examine the working of any tool and try to express it in general terms. For instance:

What is a scissors? A pair of two sharp-edged things, (also called knives), which operate against and close to each other, to cut (sever) other things.

In this definition we find the name of another tool, a knife, cutter, and for this tool we have already evolved a special symbol, showing the outline of a sword, cutter. Can we define knife, sword, cutter in general terms?

What is a knife? A tool to separate (sever).
A tool to divide things.

We are now able to express the meaning of a knife and a scissors in symbol elements, but we shall find it more convenient to use a simple outline symbols.



We see that we can dispense with auxiliary symbols and express knife and scissors with symbol elements only. Once we decide that the symbol combination tool to sever should be used for the meaning of knife, after a little practice, the picture of a knife will be conjured up in our mind, every time we see that symbol combination. This is actually the way how Chinese look at their characters, most of them do not resemble in any way the things they stand for. It is the same with us. Every time we see a number of arbitrary signs like k-n-i-f-e or K-N-I-F-E or ~~knife~~ or ~~knife~~ immediately the picture of that metallic, gleaming, long instrument comes into our mind. In fact we can teach children that any arbitrary sign should stand for knife, and they would identify it every time they see that sign.

So tool to sever is a very good symbol to stand for knife, much better than any alphabetical sign cluster. But we go further in semantography and invent an auxiliary symbol which shows directly the familiar outline of a knife, and therefore this sign does not need any translation within our mind.

Similarly, we can depict a pair of scissors by adding the number 2, indicating double tool to sever and a little practice will ingrain this new symbol firmly in our memory. When we invent again an auxiliary symbol to stand for pair of scissors we only make semantography easier and simpler.







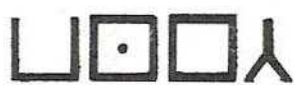



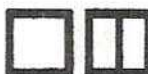

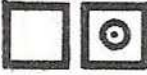











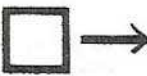









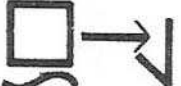



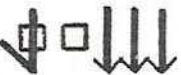

Critics may have said that the boasting title 100 SYMBOLS TO OVERCOME BABEL is a lie. There are much more than 100 symbols drawn up in this book, even conceding that the 100 symbols represent the symbol elements. For these critics here is another allegation:













































EVERY MEANING IN ANY LANGUAGE CAN BE EXPRESSED WITH THE 100 SYMBOL ELEMENTS ONLY.

This holds true not only with symbols expressing the vague meanings of our emotions and feelings; it holds true even with tools, and even with specialised tools.

On the following pages this allegation is proved in regard of the tools, for which we have already invented auxiliary symbols. We can express them with the elements only.

In order not to repeat too often the symbol element combination, we shall use one evolved auxiliary symbol to express the meaning of another. For instance we said: a knife is a tool for severing, and a pair of scissors is a pair of knives (instead of a pair of tools for severing). We should also employ the purpose particle symbol >> expressing for: tool for (the purpose of) severing. But we shall leave this out for simplicity sake (Go from the left column to the same line on the right column).

SYMBOL ELEMENT COMBINATION	AUXILIARY S.	SYMBOL ELEMENT COMBINATION	AUXILIARY S.
			
enclosure for man..... house		top of enclosure for man..... roof	
			
enclosure in enclosure f.man... room		opening in enclosure f.man..... door	
			
opening in encl.f.man ^{for} light.... window		enclosure f.books..... shelf	
			
enclosure for sleep..... bed	or	tool for sleep..... bed	
			
enclosure f.clothing,vertical..wardrobe		encl.f.cloth.horizontal....chest of drawers	
			
encl.f.water (liquid).....bottle		open encl.f.liquid..... drink glass	
			
encl.moving forward..... carriage		tool for to open..... key	
			
open enclosure	bowl,hold	enclosure ^(held) by hand,movable .....hand-luggage	
			
enclosure on water,movable..... vessel		encl.on water movable by hand...rowing boat	
			
tool,plane,horizontal	table	tool,thing downed many times..... hammer	

SYMBOL ELEMENT COMBINATION	AUXILIARY S.	SYMBOL ELEMENT COMBINATION	AUXILIARY S.
			
tool for forward moving.....wheel		thing forwarded.....to carry, transport	
			
wheel combination tool..... car		electric car..... tram, engine	
			
tool f. breaking earth..... plough		cutter f. earth..... plough	
			
many lines vertical & horizontal, a mesh, commonly a woven	fabric	plane, flat thing from fabric or wood(pulp)	paper page
			
tool f. signs on paper..... pen (sign = hand pointing at thing)		many paper pages comb..... book	
			
paper page forwarded..... letter		encl. f. forwarding things..... parcel	
			
plane thing, woven f. moving..... sail		sign, woven flag	
			
tool f. jumping over..... bridge		tool f. going over..... bridge	
			
tool f. going upwards..... ladder		tool f. going obliquely upw..... staircase	
			
tool f. sitting chair		tool for rest..... chair	
			
tool f. much rest..... easy chair		tool (horizontal) f. much rest.... sofa	

The foregoing two pages have proved that we can depict any tool of man with the basic symbol elements. And we may go on in this fashion



tool f. drawing rings.....compass



musical wind instrument.....bugle, horn

If you wish to distinguish exactly between a bugle and a horn, you may indicate that the horn is a circularly shaped bugle. Or you may draw a special auxiliary symbol, resembling a horn. It's easy enough. A trumpet is a bugle with several openings. Other wind instruments of mainly elongated shape are the piccolo, the flute, the clarinet, and the oboe. The different lengths, and a slight opening at the end of clarinet and oboe could be clearly indicated. A drum is a musical instrument shaped like a cylinder. String instruments could be indicated by three parallel lines, or we may draw the outlines. Such symbols could be of use for scores, etc.

Having now proved the case, we may go on drawing auxiliary symbols for the tools we use in house and workshop. Here are some of the most important ones.



tool f. making food
kitchen tool



pot, beaker, small
or big of glass, plastic, metal, etc.

pot with handle, small
& big
pans
small
big



lid



tea-pot



spoon



fork



knife



machine f. dividing
meat (mincing)

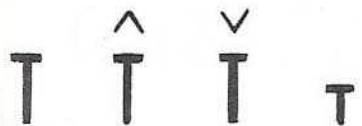


Coffee
grinding machine

Coffee is an international word, but we can easily replace it by the symbol of a berry (see p. 323) with a number (tea and cocoa would receive a different number)

Instead of the symbol for division in mincing machine (see above), we can use the symbol of the knife, indicating a cutting machine for meat, coffee, bread, vegetable, etc.

All these symbols represent THINGS. We can, of course, put the ACTION indicator to indicate the ACTION with this special THING. Even the EVALUATION indicator can be used to indicate the qualities of these tools: pot-like, pan-like, lid-like, spoon-like, etc. These words can be used to describe an unusual product, which is formed like a pot and can be used like a pot.



nail to nail
nail-like
pin



needle to needle
to sew
needle-like



seamstress
sewing machine



comb



comb with
handle



brush



brush with
vertic. handle



brush with
side handle



brush for teeth

The short lines indicate stiff material, like in a comb. The long lines indicate soft material. The symbol for teeth can also be used for tools having "teeth", f.i. a saw.



tool w. cutting
teeth, a saw



saw, circular



anvil
(table f. hammering)



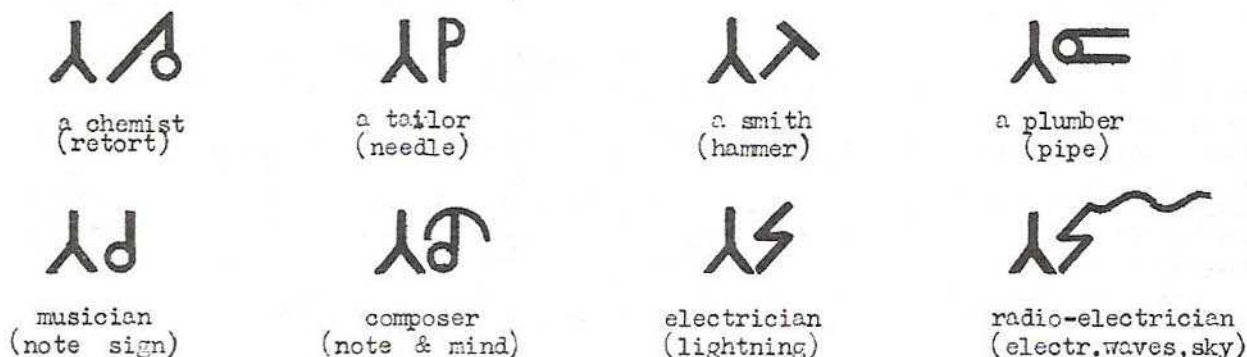
pair of pliers




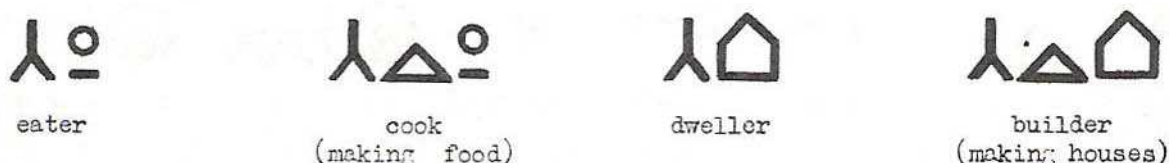
screw
driver

SYMBOLS FOR MEN AND THEIR TRADES AND PROFESSIONS

These examples show that the invented symbols are distinct and cannot be mistaken for anything else. To make sure that certain tools in certain trades should be distinguished from one another, we could agree on certain symbols to represent various trades. International symbols are already used to a great extent in different trades. A chart showing the wiring of a radio set could be read by any mechanic in any language. Plumbers too, have international symbols to indicate the various parts of pipes, bends, taps.



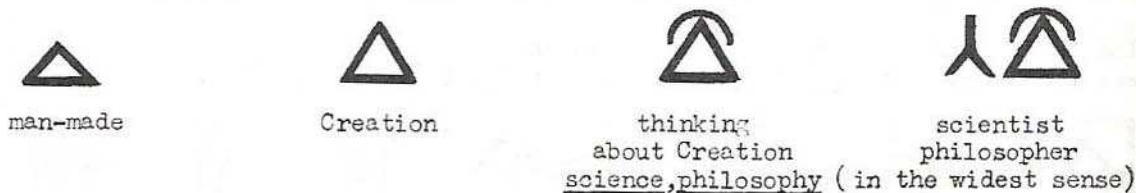
Sometimes we must employ the symbol for to make  (see next paragraph) in order to avoid a possible ambiguity. No one will mistake the above symbol for electrician for an electrical man, because such word is meaningless. However, the symbol for food and man may indicate an eater, or a cook. To distinguish ^{between} these two meanings, we have to add the symbol for to make: Man making food = cook



We can easily distinguish between a builder and an architect, the man, in whose mind the new idea, the plan of the new dwelling takes shape. If we combine the symbol for to make with the symbol for the reasoning mind, we should arrive at a symbol expressing thoughts about the making of something, and this is actually the meaning of the word plan. The architect, the engineer, the craftsman and even the housewife, (intending to prepare a meal) think first about the work they are going to make; in other words, they plan.



The low triangle symbol for to make or better, for the meaning of man-made, was evolved from another symbol, a perfect, equal-sided triangle. This is an age-old symbol, which we find on many temples and churches of bygone times. There it is connected with the symbol for God, the Creator of the Universe, and in semantography it shall stand for the meaning of Creation. It is a higher meaning, expressing the mysterious force within the stars and within the cells of life. We shall use it combined to express the meaning of Creator.



More about this symbol in the chapter "Creation and Creator."

SEMANTOGRAPHY FOR TRAVELLERS

"The trouble is that these generous designs (Esperanto, Ido, Novial, Nulango) are too rarely balanced by a concrete, living sense of actualities and practicalities. "Crackpot schemes!" is the current description of them in the mouths of hardheaded persons. This is a serious matter, since it is to hardheaded, practical men that we must look for effective action."

I. A. Richards (78)

When all the attempts at an international language have been termed "crackpot schemes" by the most important people - the practical men (the men who bring new ideas into practical use), what would they say to semantography? Probably "super crackpot idea". Because semantography suffers from one terrible fault: it cannot be spoken.

In former chapters reference has been made to the fact, that the peoples of this earth are monolingualistic, that they cling to their mother tongue, that most learning of foreign tongues have proved an utter failure. The conclusion has been drawn, that an universal international language would face almost insurmountable difficulties. Besides, there would be little need of such a language, because only few people go on travel. The nations as a whole stay at home. What they learn from foreign people and foreign countries, they learn only by reading - and they won't go to the trouble to learn a foreign language in order to read. They prefer translations, but in many cases, these are not available.

Here is where semantography comes in. It should be a help for those people - practical people, to be sure - scientists, research workers, industrialists, merchants, etc. who MUST read foreign publications, but cannot afford the time to learn to read French, Spanish, Russian, Italian, Portuguese, Dutch, Danish, and a host of others.

But semantography can be of help also for those people who MUST travel to foreign countries - practical people again - but who cannot speak a word of the language of any particular foreign country. They could make themselves understood by writing their question down.

"Again a crackpot idea!" would practical people say. A theoretical proposition, probably impossible in practical application.

But here they are definitely wrong. A symbol writing is already in practice (and what a cumbersome and difficult one) in China and it has practically united many peoples of different languages into the greatest nation of earth, comprising about 450 millions.

Moreover, it is used also by travellers, who have to go to towns and villages, where they cannot make themselves understood by speaking. Then they write their question down in their Chinese symbol writing and are immediately understood and answered.

A Chinese traveller from Canton, arriving in a Peking hotel, can make himself perfectly understood by writing his questions and reading the answers - in Chinese symbol writing. And how quickly they can write and read their complicated characters!

I myself, used this mode of communication in China, thinking in English and writing the Chinese characters down for the English meanings. And it worked beautifully.

So, this is not only a practical "idea". It's a practice already.

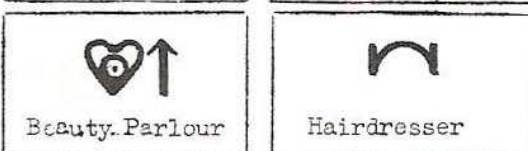
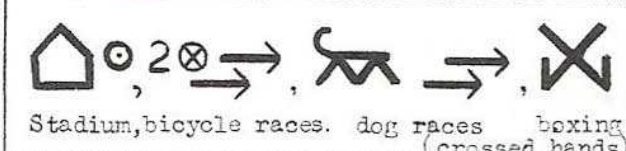
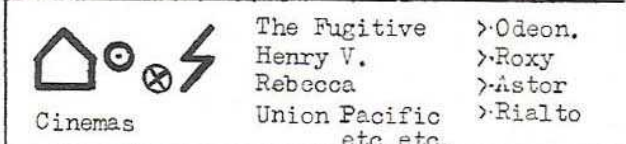
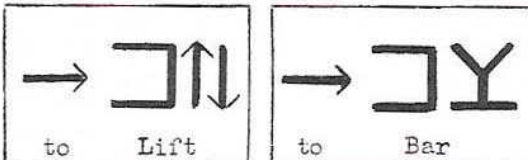
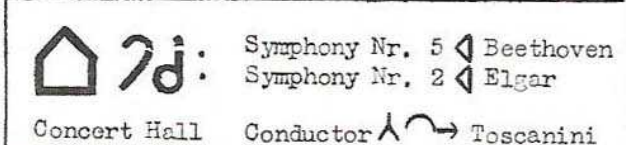
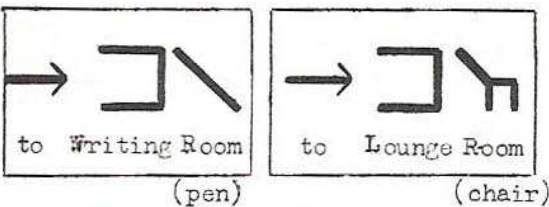
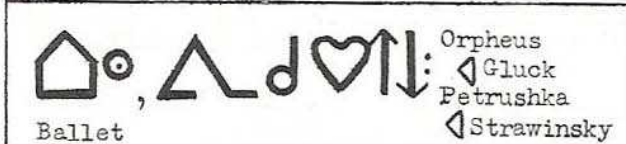
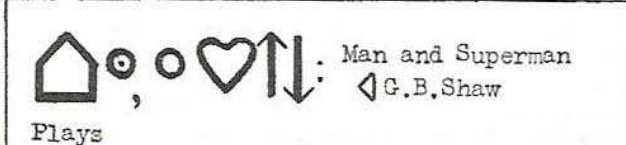
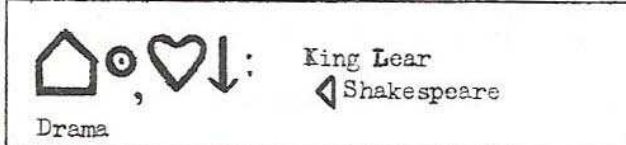
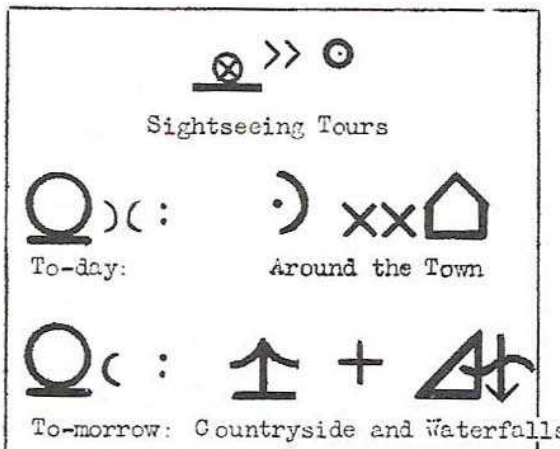
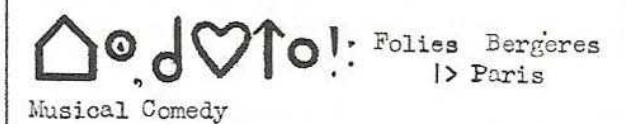
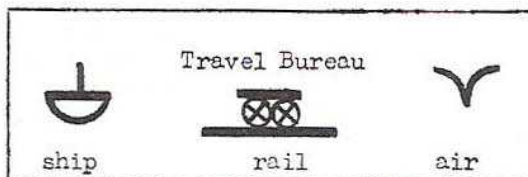
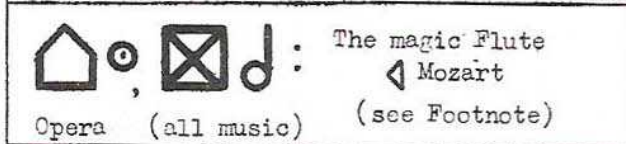
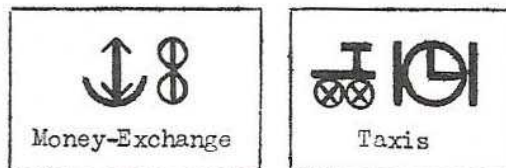
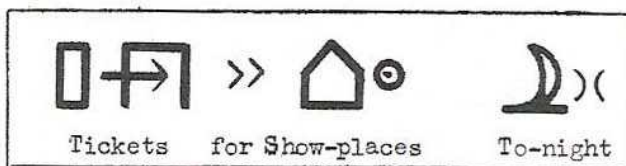
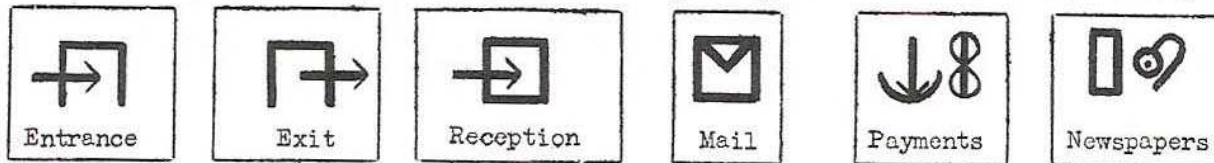
The following samples are those for sign plates in hotels, and for lines of "written conversation". What you read here for hotel uses, can be equally applied for "written conversation" anywhere, in shops and stores, in railway stations and airports, etc. etc. etc. One last warning: If you happen to be a chance reader, who thumbed through the pages and now you want to see, whether you can read these "almost self-explanatory" signs "right away", you may be disappointed. The knowledge of the foregoing chapters is necessary to read these symbols "right away". Don't forget this, please! Can you read "right away" writings in French, Spanish, Russian, Arabic, Urdu, etc.? You can't. Be considerate, please! If you would go on travel, you might take with you a little leaflet with all those signs.



house for travellers

PICTORIAL SYMBOLS FOR HOTEL RECEPTION HALLS EVERYWHERE

The following hotel signs are framed to indicate a sign plate. Beneath, a few words are sometimes added to help the reader recognize the meaning of the symbols. But this is done only in a few cases. The author relies on the reader, that he has grasped the teaching of the foregoing chapters. This is the reason why this chapter is placed at the end of this book. In order to converse in symbols, you must know how to converse.



Footnote: We could easily depict in symbols: The magic flute, Folies Bergères (Shepherdess's frolics), King Lear, (Lear, of course, is a name to be written alphabetically), Man and Superman, etc. Once these symbols are chosen, theatregoers all over the world would recognize them.

ⓂⓃ: Δ Ⓜ . Ⓜ → ⊙ 21.00 . 12 Ⓜ . Ⓜ : ✕

To-night: Dance. Starting time: 21.00 . 12 Man Band . Dress: formal.
(most, best)

The hotel hall, being the stage, is now set. Let us suppose that a traveller from Brazil arrives by air in a ~~American~~ town, where he ^{has} to spend the night to continue his voyage next day to one of his relatives, somewhere in the country. The man and his wife, who accompanies him, can't speak a word English, only Portuguese; and let us assume that the reception clerk can't speak a word Portuguese. But - supposing that serantography is already commonly used - both can write it. Then the same would happen, what has happened innumerable times in Chinese hotels. Both will "converse" in writing.

The following lines are written by hand. With a little attention it can be written neatly. The lines below are deliberately written somewhat "sloppy".

Written conversation

Translation

At the reception desk

ⓂⓃ . 1 Ⓜ ⊙ 2 Ⓜ + ⊙

"Good Morning! I want a double bed-room with bath."

ⓂⓃ . 1 ± i ⊙ 2 Ⓜ 1 + ⊙ .

"Sorry. We have only a double bed-room without a (private) bath"

Ⓜ! . 1 ⊙ . ? x .

"Good! I take it. How much?"

? x ⊙ ⊙ ⊙ > .






"How many days will you stay here?"
(For this symbol ⊙ see later chapt.)

1 ⊙ . 1 ⊙ → ⊙ x .

"1 Night. We will depart to-morrow."

Ⓜ » ⊙ : 6 \$. ! ⊙ , \ / ⊙ .

"Price for the room is 6 \$. Please fill out this form."

 Name	 Address	 accomp. by	 Number of Passport travel paper	 issued at on place, date
Rodriguez Prestes	São Paulo av. Bolivar 15 Brazil	Ⓜ Maria	17538	São Paulo, 16-9-48

ⓂⓃ . 1 ⊙ ⊙ ! ⊙ ⊙ ⊙ #632 > 6 . ⊙ . ⊙ x .

"Thanks! This your key. Please to the lift. Room Nr. 632 at 6th floor. Good day!"

At the bank counter:

<u>Written conversation</u>	<u>Translation</u>
Q ^x . ? : l ₂ v u 8 / □ ⊕	"Good day! Are you able to cash this bank cheque?"
l ⊕ > l ⊕ . l ₂ ↓ ⊕ Q _c , 1500	"I shall send it to the Bank. You shall get the money to-day at 3 p.m."
⊕! . ♥ ↓ . ! ♥ ↓ / ⊕ ⊙	"Good! Thanks! Please exchange these coins."

At the travel counter:

? ⊕ Q _c x ⊕ ⊢ > Cleveland.	"What time to-morrow does the train depart for Cleveland?"
xx ⊕ x ⊕ ⊢ ⊕ 6.30 > Δ	"The express train starts at 6.30 a.m. in the morning."
xx · l ⊕ . ? ⊕ 2. x ⊕ ⊢	"Much too early! When goes the next train?"
> ⊕ 10.25 , → Cleveland > ⊕ 20.14	"At 10.25 a.m., arriving in Cleveland at 20.14 p.m."
⊕! l ⊕ 2 ⊕ ⊕ , ⊕ ⊕ (I) x Prestes. □ 632	"Good! I book 2 tickets first class. My name is Prestes. Room 632."
♥ ↓ . ⊕ ⊕ ⊕ > Q _c > 14.30	"Thanks! The tickets will be here to-day at 2.30 p.m."
? ⊕ ⊢ l ₂ ⊕ >> ⊙	"What time starts your sight-seeing tour?"
> ⊕ 14.00 . | ⊕ 3 ⊕ ° . ! ⊕ ↑	"At 2 p.m. It takes 3 hours. It's beautiful."
l ⊕ 2 ⊕ ⊕	"I buy 2 tickets."

At the theatre counter:



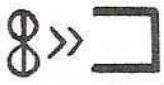


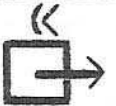

















l ♥ s 2 ⊕ ⊕ >> ⊕ ⊕ ⊕ d	"I like to have 2 tickets for the opera."
l ⊕ > ⊕ ⊕ + ⊕ ⊕ ⊕ > l ₂ □	"I shall telephone to the theatre, and then shall send the tickets to your room."
l ♥ s . □ . l + - ! x ⊕ ⊕	"I like to have a box, but not the most expensive ones."



PICTORIAL SYMBOLS FOR NOTICES IN ALL HOTEL ROOMS




471
(339)

Having thus attended to all his affairs,swiftly and-as you see - without difficulty, although he cannot speak a word English and the clerks cannot understand a word Portuguese Mr.Prestes and his wife set out for the elevator.No written conversation is necessary there,as the key tag shows already symbol elements of semantography,the number 632.





At the room, he finds 3 informative writings in semantography: a notice at the inside door,a notice how to handle the telephone and symbols at the electric push buttons.

 632		NOTICE	 : 6 \$
Room Nr.632	2 beds.		Price for room: 6 \$
		 12.00	
Room	to be left	before 12. a.m.	or second payment will have to be made.
			
Please,	deposit	your	valuables at the safe. The manager will not
			
be responsible for	(thought f.others)	valuables(left)in the room .	
		 22.00	
Please, no	noise	after 10 p.m.	
			
Laundrying within	3 hours	Cleaning and pressing 1/2 hour.	chemical cleaning 4 h.
(bath f.fabrics)		(de-dusting)	





 >  USE of TELEPHON

   -----



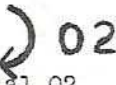
Lift receiver, Listen f, sound: intermitten - - -

   - - - - - 

Turn dial, if sound: - - - - - connected

  -----  -! 

If sound: continuous ----- not connected

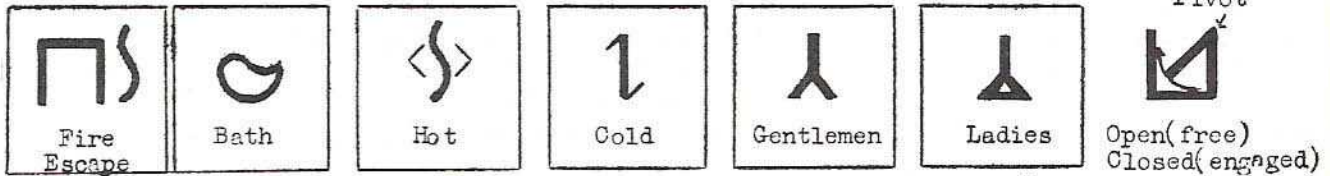
For calls outside town : dial 02

 >> Push button for:

-  Room Maid
-  Waiter
-  Drink Waiter
-  Porter
-  Messenger

The symbol for waiter(man,food) indicates actually an eater.However,the meaning of waiter and drink waiter cannot be mistaken,although the symbol for to bring is missing.

Mr. Prestes surveys the environments on the 6th floor



For additional symbols: to the staircase, to shower room, towel, soap, bed linen, pillow, cushion, blanket, etc. etc. see the chapter on symbols for ships pp.236 ff.

Pivot
Open (free)
Closed (engaged)
Upper bar of symbol moves automatically by turning the lock.
(see p.238)

Now, Mr. Prestes ring the bell for the room maid, the waiter, etc. and gives his orders again in writing.

Written conversation

Translation

To the room maid:

!♥, △ 2 ♡ - -! x <>

"Please, prepare 2 baths, but not very hot."

To the waiter:

? ⊙ 2. ∞ .

"What time is lunch?" (2nd feeding)

-! . | ⊙ 12.30 .

"Not before 12.30 p.m."

!♥, ☉→| 4 ∞| | ✕ .

"Please, bring 4 ham sandwich." (food, between)

To the drink waiter:

!♥, ☉→| 1 ∞| 2OH + 1 ∞~CO₂

"Please, bring 1 bottle of beer, and 1 bottle of aerated water."

To the porter:

↓ ⊙² 2 ☉ > ☉² .
/ ☉→| ♥! ☉→| .

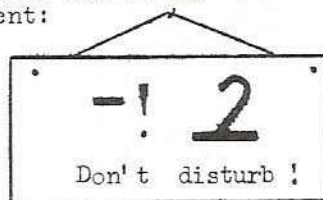
"I deposited 2 suit-cases at the air port.
This is the deposit docket. Please fetch them."

To the messenger:

↓ → / ☉⚡. ? : k ∞ ☉ ~ ☉²
↳ Brazil.

"Send off this telegram. Can you get any newspaper from Brazil."

After he got all the things he asked for, Mr. Prestes hangs out a small card-board sign provided by the hotel management:



TO THE PIONEERS FOR BASIC ENGLISH, ESPERANTO
IDO, NOVIAL OR OTHER AUXILIARY LANGUAGES !!!

"Most people who now advocate an artificial language approach the prospect with a ready ear for new proposals. The plethora of projects... should not make us despair of unanimity. On the contrary, failure brings us nearer to accord."

Frederick Bodmer and Lancelot Hogben (5)

"Zamenhof was willing that his Esperanto should be reformed, transformed, or even discarded altogether, provided it be in favour of a language so established and supported that it would be secure once and for all."

A.L. Guérard (20)

As said before, the foregoing examples of a "written conversation" is not an theoretical idea only. It has been a commonly used practice for hundreds of years in the hostels of that largest nation on earth, the Chinese.

We have seen how Mr. Prestes, who can only speak Portuguese, has been able to make himself perfectly understood and quickly answered by other people, who could only speak English. The idea to replace the symbols ^{spoken} by words, suggests itself. To be sure, it would only be a sort of pidgin tongue for travellers only, devoid of richness and subtleties of expression. But this is not necessary. On the contrary, a language for communication between people of different languages must be very clear to the point. This can only be achieved by very simple expressions, which mean only one thing, and not two very different things (as many ambiguous words in any language mean).

The symbols and the word order of semantography may fill all necessary specifications. Moreover, its system enables immediately to recognize vague meanings; it would work.

We have behind us about one hundred years of endeavours by many hundred thousands of enthusiasts. Looking back, there might be some ground for despair. The mother tongue has proved irresistible; the lack of a force and necessity to learn an auxiliary has ^{now} limited the numbers of learners to small groups of enthusiasts only.

Here is a serious proposition to you all. Your chief aim is understanding among the nations in the widest sense of the word. Apart from other factors, there is the handicap of the very different structures of many languages, the grammar, the inflections, the word order, the idiomatic uses, the anarchy in the uses of particles, etc. etc.

Semantography provides a common structure. Just like the symbols of mathematics, which are perfectly understood and read in any language, the symbols of semantography can be equally handled and understood.

Once semantography becomes a practical reality, the urge ^{international} to supply words for the symbols will come by itself. Today travellers in English-speaking countries, try an atrocious pidgin English. In countries of the Latin tongues, travellers use Latin words, which sound similar and ^{are} written similarly, and somehow they are understood. In the Teutonic countries, German words, are sometimes similar to Dutch, Norwegian and Swedish and are understood when used by travellers. Just as a Portuguese can make himself understood in Italy or France, a Czech can ask for many things in Poland, Yugoslavia or Bulgaria.

If semantography is used in the hostels, the railway stations, the airports and the ships of the world (apart from the use in scientific reports, etc), then the necessity to provide words for the symbols to be used as a spoken world auxiliary will make itself so much felt, that the demand would have to be met.

Then the supporters of the projects of Basic English, Esperanto, Ido, Novial, etc. would come to the fore. It might be, that the advantage of using English words for the symbols would be recognized, but the political situation at that time, might favour Esperanto, or Ido, or Novial (which are dialects of the same project). Decision will then be made.

In any case, the supporters of an auxiliary world language might perhaps recognize that the realization of their dreams would be greatly fostered by the establishment of semantography as a forerunner.

The way to a world auxiliary, be it Basic English, Esperanto, Ido, Novial, etc. must pass through the stage of a symbol writing, read and understood in all languages.

PIONEERS FOR A WORLD AUXILIARY ! SUPPORT THE SPREAD OF SEMANTOGRAPHY AS A STEP TO
YOUR ULTIMATE AIM ; UNDERSTANDING AMONG THE PEOPLES OF THE WORLD !

THE CITIZEN AND HIS CERTIFICATES

"In 1917, Wilson proclaimed the great principle of self-determination, according to which every nation had a right to direct its own affairs; but unfortunately he forgot to append the definition of the word "nation". Was Ireland a nation? Yes, certainly. Was North East Ulster a nation? Protestants said yes, Catholics said no, and the dictionary was silent... If president Wilson had been trained in logical accuracy he would have appended a foot note saying that a nation must contain not less than some assigned number of individuals. This however, would have made his principle arbitrary and would have robbed it of rhetorical force."

Bertrand Russell(1)

"During and after the (first world) war every article or book on current affairs and every speech by a politician on the state of Europe contained it's allusion to the sacred principle of nationality. It sounds well; it sounds, on the face of it, quite simple. Yet we cannot pause there. We have got to ask and ask with relentless determination "What do we mean by nationality?" Who dare wager that one in twenty of our phrase mongers has a definition ready to hand? They would say after a little hesitation: "Common blood, common race, that sort of thing!" No one denies nationality to Switzerland. But the Swiss have neither common tongue nor common race. Nor have the United States. The Jews have common race and belong to every nation. Well then, common territory? But this is just the disputed issue."

Ivor Brown (79)

We have formed a very important symbol element



paper page

This symbol indicates usually a paper page written on and it stands before another symbol and indicates in combination an invoice, docket, receipt, order, newspaper, etc. etc. We shall use it also to indicate all the many certificates, which a citizen has got to have during his life span from the cradle to the grave. If you have no birth certificate, you are practically unborn and non-existent for the bureaucrat. Should you happen to be declared "dead", you may run into all sorts of trouble, when claiming your rights as a living being. Until your death certificate is rescinded, you are nothing more than a living corpse.

The meaning of all those certificates are simply depicted in semantography:



birth certificate
(star under roof)



death certificate
(life crossed out)



menu card
(much food)
(multitude)



ration card
(division of food)

The above symbols are short cuts, of course. We did not bother to add the symbol for official (state) or legal (judge), and we did not affix the indicator for the active or passive, transitive or intransitive verb. Naturally, there is a big difference between a certificate ^{describing} that a man died "intransitive", that means "all by himself", and a certificate, ordering that a man be put to death, and a coroner's certificate, that a man has been forced (passively and transitively) to die. The reader who has already acquainted himself with the grammar of semantography, knows that all this can be expressed by a different position of the indicator. (See the chapters on pp. 188, 243 and 271)

Between the birth certificate and the death certificate a citizen needs all sorts of other certificates and the ration card, is that certificate, which - in times of duress - has been made by the authorities, the certificate on which life and death depended. The Germans in occupied Europe have made it the whip, with which they could bring the subjugated nations/work for their war effort. And there are still large parts of this globe in which the ration card is used as the modern instrument of coercion.

At the end of this chapter we shall draw up a very important citizen certificate, his passport, which enables him to travel to distant lands. For this certificate, more than for any other, it is essential that officials of different countries should be able to read it. At present they are only able to read the visa given by the consulate of their country. They can read the visa, because it is written in their language, but they are unable to check up on all the other particulars in the passport. Here it is where international symbols would suit admirably, because they could be read in any language.

Passports are a curse, no doubt. There was a time, before the first world war, when you could travel anywhere in Europe, except Russia, without any passport. Let us hope that one day this happy state of affairs will be restored. But even then, there will be the case of explorers, geologists, archeologists and other scientists who penetrate far away countries and who have to rely on some papers, given them for protection by a king, a chieftain, or a government. Such papers are unreadable even to many village elders. International symbols again would be a good medium to cover any language and any dialect. There is the case of Marco Polo on record. He, a Venetian, and a high official at the court of Kublai Khan, the emperor of China, travelled through the empire, and everywhere were his credentials understood although read in different languages. They were written in Chinese symbol writing.

But a certificate for international travel is not the only certificate for which symbols would be very useful. There are countries where two, three and even more languages are "official", besides the languages of small minorities, who are not recognized as "official" and whose adherents "suffer" accordingly. Everyone, who has lived in such countries, will agree that it is the language question, which causes the heated arguments, and which is one of the main factors to split peaceful communities, who depend on each other. Here again, certificates written in semantography would be a good thing, wholly neutral, wholly readable and understood, even in the remotest dialect of a remote mountain valley.

To write in symbols: Citizen's certificate, we must now evolve the symbol for the Citizen. This is, as we shall see, a very difficult task, and, as the citations on the foregoing page show, the peace of the nations depend to a large extent on a good interpretation of the meaning Citizen. Who is a Citizen? A member of a Nation. But what "is" a Nation?

The word doesn't say very much, although it has become "international". In Esperanto the word is "nacio". In Ido it is "naciono", both arbitrary sounds with no indication of the real things. The word stems from the Latin natus, being born (nascent in English).

If semantography is a writing truer in meaning, than it should give us a better understanding of the meaning of nation.

We shall try now to develop a proper symbol, and this analysis should be another example how semantography could be used to clear up controversial and difficult meanings. In other chapters the similarity between chemical formulae and semantographic formulae has been indicated, and the method of the chemist will help us to ascertain the necessary symbols.

If a chemist receives various specimens of stones, crystals, powders, etc. of different shape and different colour, he will examine all of them to ascertain what elements they contain. Let us suppose that he finds that all those entirely different looking things contain in all cases one atom of Sodium (chemical symbol Na from Natrium) connected with one atom of Chlorine (chemical symbol Cl). Then he will write the formula NaCl. This little formula will then be the symbol for all those specimens. They are what we commonly call ordinary salt.

Let us use the same method. What is common in all those specimen which we call a nation? Well, they are all human beings, or in short humans, a clearly defined biological entity, divided into two different kind, males and females. The symbol for nation must therefore contain these symbol elements:



male
human



female
human



folks, people
(at least two)



group
many people



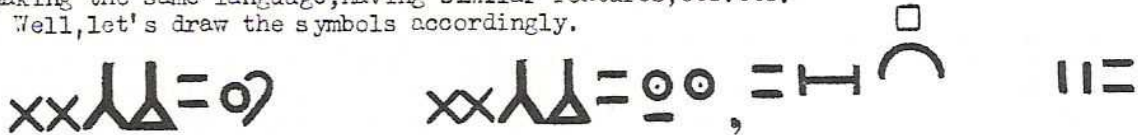
nation
very many people

These symbols show clearly what is meant: a multitude of upright beings all with two legs. If only 10% of all the humans would be born with 1 or 3 or 5 legs, then we would have to devise another symbol. Just as in chemistry, a symbol is agreed upon if it applies to all entities. Of course, a man or a woman may lose a leg through an accident. But even then, they will soon acquire another limb, even an artificial one.

Well, the symbol for nation shows very many male and female bipeds. But many and very many are vague EVALUATION words. As Bertrand Russell remarked (see quotation), President Wilson did not stipulate the number of individuals which constitute a nation. In consequence thereof, the inhabitants of a block in a German city, declared themselves in 1919 to constitute a nation.

"All this is silly!" would nationalists of many nations say, "a nation is not characterized by the numbers of bipeds, but by some other characteristics, as for instance, speaking the same language, having similar features, etc. etc."

Well, let's draw the symbols accordingly.



nation
v. many people, speaking same
(= equal) language (mouth, ear)

nation
v. many people having equal colour of
eye (for instance) or same length of skull

near equal
similar
(s.p.199)

Actually, the above symbols indicate what nationalists believe to be the essential characteristics of a nation. But does it satisfy the scientist? No! Applying the scientific method we find the above definition to be a lie.

Firstly within one nation different languages are spoken, as for instance in Switzerland, Canada, the United States. But even with those nations, who adhere to one language only, as for instance in Germany, there are large parts of the population in Northern Germany, who have great difficulty to make themselves understood to people from Southern Germany. And there are the Wendes, a Slav group in the heart of Germany, speaking a Slav tongue. They are not Germans, although Hitler declared them as such. And what about the French-German border dialects in Alsace Lorraine? Apparently this problem could only be solved by guns, was the conclusion of German nationalists.

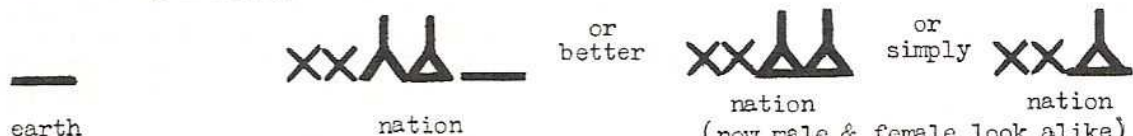
But the other definition: similar bodily features is a lie too. For a while the terms of long skulls and broad skulls were used for a distinction, until it was discovered that the broad skulls in a part of Germany came from the custom of bedding the newly born babies on hard cushions which broadened their pliable baby skull. In another part of the country long skulls prevailed, because soft cushions were used in the cradle.

Not even the symbol near equal, similar, (instead of equal = which, by the way, should only be used in mathematical quotations) helps in the definition. We know, that the members of any nation show the most diversified features.

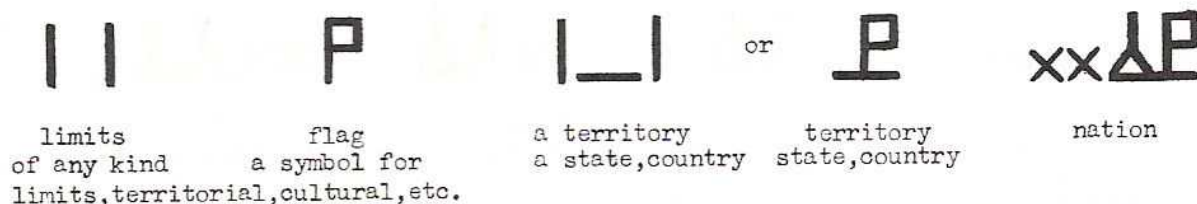
Religion as a distinguishing factor will not help either. The members of a nation usually profess different faith.

Well, is there anything, which is common to all the upright bipeds of a nation?

Let's get down to earth. There is something real, a chemical THING which is common to all of them, the earth they tread.



We have now found another characteristic common to all humans, and just as in chemistry, something tangible, chemical, the earth. But this will not satisfy the nationalists. They will point out at least, that the earth in question has limits, boundaries.



But even these symbols are not satisfactory, at least for the chemist. He will point out that the symbol for limits indicate a word, which is only a mental conception. It is applicable to chemical THINGS and physical ACTIONS, but standing alone, it does not mean a THING or an ACTION. It's a human EVALUATION all right. And sure enough, there have been terrific human differences in regard of territorial boundaries, and there still are.

If we contemplate just for a minute how much the boundaries of territories have changed during the last 150 years over the whole earth, we get an idea of the vagueness of the meaning. We use the flag as a makeshift symbol to cope with a vague situation, which might change any day. How many millions of humans woke up during the last ten years to find that they belong now to another nation and sure enough, there was a different flag fluttering from the town hall spire.

But even this makeshift symbol for nation does not satisfy the chemist. He will point out that a Brazilian may live in the United States, a territory over which a quite different flag waves. So, we have to look to another characteristics, between two men living in New York, the one being an American, the other being a Brazilian.

And there is a difference. Both hold different certificates. Let us now draw a new symbol.



nation

very many people holding similar state certificates

This is the most practical symbolization at present. It works in practice, as anyone knows who is the owner of a passport. Even the Nazi hooligans had respect for it, but unfortunately the owner was beaten up first in many cases.

However, the chemist will still not be satisfied. If this is a symbol applicable to every human on earth, how about those millions of unfortunates, the so-called "stateless" persons. They are denied a state certificate, and consequently they are harrassed from frontier to frontier.

And if that piece of paper is to stand for the meaning, that the owner is entitled to equal treatment within all the members of his nation, how about this? How about the 60 millions of "Untouchables" within the Indian nation? And how about the millions of people who are denied a passport by their government, who can never leave their country?

The chemist will tell us, that only a fortunate fraction of the people of this earth will get such a paper. The symbol is practical only for those, who have a certificate, be it a passport to travel abroad, be it a labour certificate to take on work anywhere they like, be it a ration certificate to buy their food in certain stores or anywhere they like, be it a certificate for voting as they like.

As long as all the citizens of this earth can't get similar papers, which entitles them to similar rights, the chemist must refuse to include the above elements in a formula for the citizen, and the nation, a large group of citizen. He will therefore use only those elements which are found with all humans of this earth, with every one.



citizen

of this earth

This is a clear symbol which is applicable to any and all humans of this earth. If anyone thinks, that he can find a better symbol to express a citizen, a national, he may try, but - his definition must be applicable to all human beings. Furthermore the symbols must indicate real THINGS, not vague EVALUATIONS, which are different in different minds. The words many and very many are vague in meaning; they are wholly inadequate to fix the meaning of nation.

This analysis may be very disturbing. It seems that the whole conception of the word nation is so vague as to be almost meaningless. As this word is printed daily hundred thousands of time, as we know that the peace of the world depends to a large extent on a clear meaning of ^{the} this word, we may turn to this "chemical analysis" to look for a better understanding of "highly dangerous and inflammable matter"

We would then not be surprised to find, that the above symbol corresponds exactly with the enlightened view of some men, who untiringly point out, that we are all

Citizens of one World

We may then find that the ceaseless war about boundaries is utterly senseless. We may come to the conclusion, that we could live together.

A SAMPLE PASSPORT WHICH CAN BE READ IN ALL LANGUAGES

But, alas, there is still a long way to go until this aim is achieved and in the meantime we need passports on our way. Below is a sample of a passport, they are fairly uniform in all countries, and are printed (besides the native tongue) in French, as an international medium. But how many officials can read French? Besides, the entries are always made only in the native tongue. I have chosen a British Passport, because of all the great states - this is the one, which come nearest to the symbol for citizen: Every human born on British territory becomes a British citizen (if he wishes it)
A passport is a BOOK (of the) STATE (for) TRAVEL (see symbol)


 Passport


 By his Majesty of Great Britain
 The Consul at *Port Said.*


 requests anyone: to allow to pass the
 passport holder and help and protect
 him, when in need.

 *Port Said*
 Given at
 *9th. D3. March. 1948*
 on
 *C. L. Johnston*



 ± 32  This book has 32 pages.

 < 
PASSPORT
 UNITED KINGDOM OF GREAT BRITAIN
 AND NORTHERN IRELAND

 <  : *235762*
 Nr. of P.

 <  : *John Sanders*
 Name:


+  :
 plus Wife:


+  :
 and children:


 : 
 Nationality: British by Birth


Explanation of a few symbols: Majesty = First man, highest, of state Great Britain.
Consul: Man acting outside his state for (purpose) Great Britain.


- 2 -


 Description


 *Engineer*
 Occupation:


 *Leeds, England*
 Place of Birth:


 " *5-9-1897*
 Date of Birth:


 *Port Said*
 Residence:

 *5' 8"*
 Height:

 *blue*
 Colour of eyes:


 *brown*
 Colour of hair:





 *0 nil*
 Special peculiarities:



 Children





Name	Date of Birth	Sex
.....
.....



- 4 -

 Territories (limits) of this passport



  <  
 All countries of the British Commonwealth of Nations.




  < *Europe*
 All countries of Europe



   
 including the U.S.S.R. except Turkey




 < 

Time-limit of this passport

 *5*  → *9th. D3. March 1953*
 5 years, ending

 ? -  
 if not extended.

  →
 Time extension, ending.....

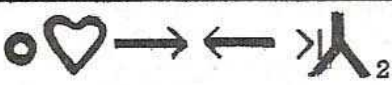
  <  >
 Given by at.....

These four pages should suffice as an example of a passport, in which French is replaced by semantographic symbols, readable in any language.


Some people may say: "Even admitting that French on passports is of little value, because few officials all over the world understand it, we could well get along without it and without semantography." Such critics think only of the travels in so-called "civilized" countries (in which prior to 1914 no passport was necessary). But they don't know of the harrowing experiences of travellers in remote parts of this world, where they are hauled from the train or the car, and detained for many hours, simply because the armed guard is ignorant of reading and too afraid of making a mistake. To be sure, he arrests the man, until his superior arrives. Considering the fact, that native soldiers are today on guard in any part of Asia, Africa, and - Europe, who can't read English, French and not even their native tongue, it may be considered a great step forward, if they would be taught a symbol writing, so simple that it could be grasped easily.

Then there are other instances where such a writing could come in handy. Let us take the example of a geologist, who roams a remote country on behalf of the government of this country. Even if he has with him a native in uniform who can speak the language, it does not mean that he is assured of assistance from the population. Too many natives in all kind of uniforms are roaming today the countries of the world, exerting hardship on the peaceful village dwellers.

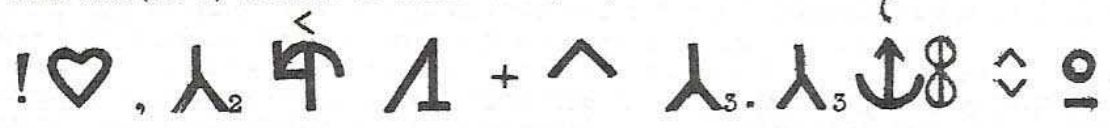
A writing in simple symbols, which could be read by the village teacher, or the village elder, or - what would even more impress the illiterate - by a village boy, who happened to learn it in the boy scout group, such a writing could be of help for the travelling scientist. Here is a sample of such lines:



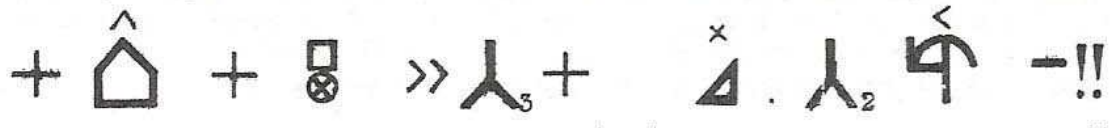
 Hearty Greetings to You



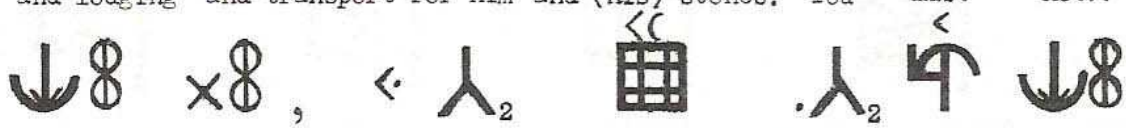
 This man (is a) student of mountains (who) collects stones.




 Please, you must help and protect him. He will pay for food




 and lodging and transport for him and (his) stones. You must not!!



 take (charge) dear (much), or you will be imprisoned. You must take



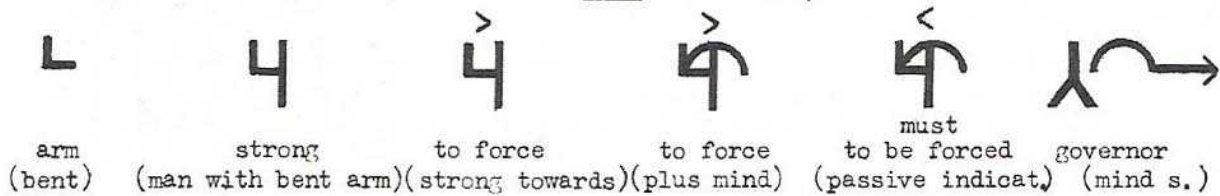
 similar prices like any man (of) this village pays.



 Thanks and Happiness to You The Governor of Liberia

The above letter contains two symbols which indicate force. The one is the obvious outline of a prison window with its heavy bars. The other indicate the strength to

to force into prison, This needs physical and mental strength and this is sufficiently indicated by the symbol for must (see p.276)



Consequently the sentence in the foregoing letter:

You must not charge much.

should be read: You are forced not to charge much.

and it is the mind of the governor depicted, because the governor says it.

The reader has already noticed that we have no difficulty to type the particular ornamentation of flags with our typewriter. This has its advantage, because in the next chapter we are going to see how semantography could be used for a few lines of "News in Brief for Foreigners" to be printed in daily papers. There it is important that the reader should recognize the country from where a particular news comes. We could, of course, also type in the Latin alphabet the name of the country: United States, Belgium, Netherland, Sweden, etc. but this procedure has its disadvantage, because the names of the states are different in different countries. In France, for instance the above names are written and pronounced: États-Unis, Belgique, Pays-Bas, Suede, but Sweden is pronounced and written in Sweden: Sverige. Symbols for the different countries may therefore be of advantage. In reading, the reader would pronounce the name as it is written and pronounced in his mother tongue.

The first line of symbols is started off with the flags of the five states, the languages of which are official in the United Nations: United States, Great Britain, France, Russia and China. It should be understood that the limitations of the semantography typewriter forces us to certain simplifications. In newspapers and documents, the correct flag can be easily displayed. We shall also see how the various colour schemes can be overcome in black and white writing, printing and typing. The tricolore of France with its three vertical coloured stripes of cloth, is adopted also by other countries, the difference being different colours. We shall add an initial letter for those countries, but the symbol for France should be the tricolore outline without a letter, in memory of the great tradition of the French Revolution, which contributed so much to democratic ideals.

SEMANTOGRAPHIC SYMBOLS FOR THE FLAGS OF THE FIVE GREAT UNO POWERS.

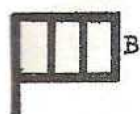


SEMANTOGRAPHIC SYMBOLS FOR THE FLAGS OF THE BRITISH COMMONWEALTH OF NATIONS

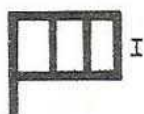


Flags for the other territories of the British Commonwealth could be similarly drawn up. In the symbol for Eire we see how we can distinguish her tricolore from the tricolore of France. We added the initial capital letter E. We can proceed similarly with the flags of all other states having tricolores of vertical stripes or horizontal stripes. Some states have flags consisting of only two stripes vertical or horizontal. Other states, like the Scandinavian countries have a similar cross, with different colours. Flags which show a tricolore and an additional outline, easily typable, may be depicted with that particular outline, instead of adding a capital letter.

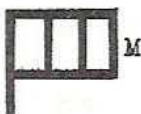
FLAGS WITH THREE VERTICAL STRIPES



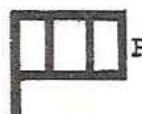
Belgium



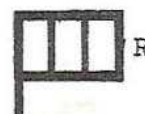
Italy



Mexico



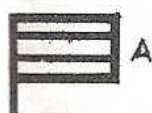
Peru



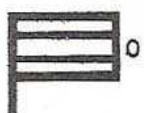
Roumania

Some of the above displayed flags are the merchant flags only, as for Mexico, Peru, etc. The ensigns contains an elaborate picture, impossible to type with our typewriter. However, these symbols with the additional letter are simple enough, and no objection should be raised by the states. The final decision about the semantographic symbols for the different states will be made by the Institute for Semantography, after consultation with the states in question.

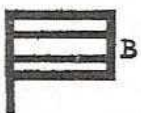
FLAGS WITH THREE HORIZONTAL STRIPES



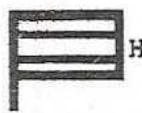
Abyssinia



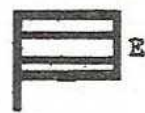
Austria



Bolivia



Netherlands



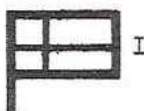
Spain

Here we face a dilemma with the capital letters. There are the flags of Abyssinia, Argentina and Austria, all three words starting with a capital A. We can overcome the difficulty by agreeing that the capital letter of the native word should be used. The word Austria is not used in Austria. There it is called Oesterreich. Consequently we shall use the capital O. The same applies to H-olland, instead of Netherland; E-spagna instead of Spain. People would soon know what it means. Argentine displays a sun in the middle. This is easily depictable by a small circle. We could if necessary use two letters: AR for Argentine. Other countries with horizontal tricolores are: Hungary, Salvador, Venezuela, etc.

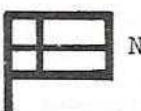
The Scandinavian flags are similar in so far as they show a cross, near to the pole.



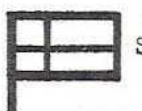
Danmark
Denmark



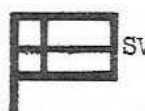
Island
Iceland



Norge
Norway



Suomi
Finland



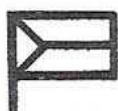
Sverige
Sweden

Finland may concede to have its flag represented by a capital F so that Sweden could use the S for simplicity sake. However, two letters SU or SV are no complication.

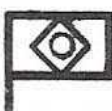
The flags of other countries display either a two colour stripe ornament or another characteristic outline, which can be easily depicted as the examples below show.



Poland



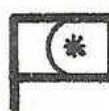
Czechoslovakia



Brazil



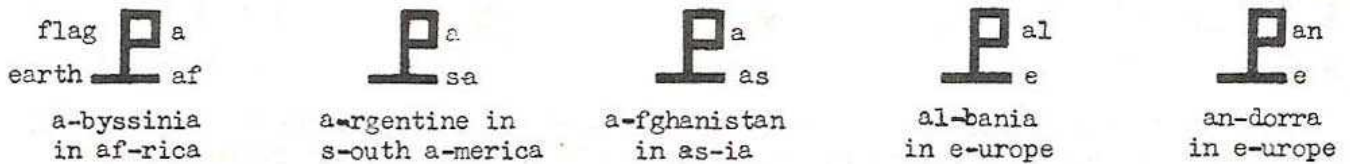
Switzerland



Turkey

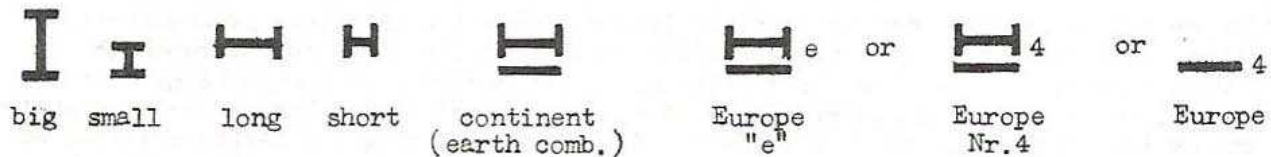
As said before, on consular papers, and other printings, the full flag in all its details is displayed. The above symbols should only be used in typing, and especially in printing of newspapers, where much detail will be smudged on cheap newsprint. However, private writers in semantography may dispense with all those symbols, and may use our old symbol for state together with one or two small alphabetical letters. The cheap typewriter has no capital letters. Furthermore we could add a letter to the earthline to indicate the continent. This would help in the recognition of small countries like Monaco, Liechtenstein, etc. The following letters should be used: e = europe, a = america, na = north america, sa = south america, af = africa, as = asia, eas = east asia, swas = southwest asia, au = australasia.

The four direction^{words}/e-east, n-orth, w-est, s-outh are already international and the initial letters are already in display on compasses and vanes everywhere.



A little practice would soon acquaint the learner with these symbols. In fact, they are easier than the usual flag symbols. If you don't believe it, just think for a moment if you would recognize the flags of Lebanon, Syria, Afghanistan, Bulgaria, Bolivia, Uruguay or even some of your neighbour countries. The above symbols are much simpler.

But we could even dispense with alphabetical letters and use numbers only. We could number the countries according to their square surface: Europe 1, Europe 2, Europe 3, etc. We could even number the continents. Numbers for the countries are not advisable, but we have only five continents, which can be easily numbered according to their surface. Asia would carry the number 1, Africa 2, North and South America 3, Europe 4 and Australia 5. A continent can be depicted as a long piece of land. The symbol for long is more appropriate than the symbol for large, because the former expands horizontally like a continent.



It should be understood that the above symbol for continent is a combination symbol. The words: big (strip of) earth, or long (strip of) earth, would have to be written in two separate symbols earth, big, earth, small. The symbol for "short" continent, could be used for such large pieces of land as Greenland, New Guinea, and other sub-continents.

We may now close this chapter, hoping that we have proved that we would not have much difficulty in symbolizing the various countries and pieces of our small planet. One thing, however, must be taken for granted: international co-operation and agreement. In view of the fact, that all nations have agreed on the International Flag Symbol Code, we may hope that this precedent will assure us also of agreement in this matter.

THE WORLD POWER, THE PRESS

"The educational function of the press is to provide the reader with a working map of the world in which he lives, the world which he influences and which influences him."

Kingsley Martin (80)

"The newspapers can raise the general level of culture by giving the public accurate news on which to base the formation of opinion, and by accustoming the public to demand and to expect the truth in all matters of high social significance. The newspapers in free countries are already doing this to a far greater extent than is realized."

Paul Scott Mowrer (80)

"The progress of science and the extension by means of compulsory education of the rudiments of knowledge to a greater number of individuals raised the Press to a higher level... Certain newspapers even aspired to become the promoters of ideas."

Sanin Cano (80)

"UNESCO must seek to discover what are the various barriers to free, easy, and undistorted dissemination of news and knowledge between nations, and (must) see that they are lowered or if possible removed.

One necessary piece of work which UNESCO must undertake is a study of the real effects of radio and film on illiterate peoples hitherto out of general thought.

At the moment nothing very definite is known about this; yet we must know it if we are to make the best possible use of these revolutionary methods. There are thus two tasks for the Mass Media division of UNESCO, the one general, the other special. The special one is to enlist the press and the radio and the cinema to the fullest extent in the service of the formal and adult education, of science and learning, of art and culture. The general one is to see that these agencies are used both to contribute to mutual comprehension between different nations and cultures, also to promote the growth of a common outlook shared by all nations and cultures." Julian Huxley (66)

Some readers, arriving at this chapter, may shudder in horror. "Now, he is going to suggest that newspapers should be printed in semantography!"

But nothing of this sort is contemplated. The author is a practical man, an engineer, and he wants to make a practical suggestion only, one which may appeal to the men of the Press. They too are very practical men.

This is the age of travel. Small people, workers, tradesmen, clerks, who never set their foot outside of their little town and village, discover that travel and adventure is within their means. Travel salesmen pack them into buses and whisk them off to distant cities, to countries with grandiose sceneries, to dreamy islands in the blue sea, where they spend a week or two of a life, ^{of which} they always dreamed. Returning home, they are telling enchanted tales to their neighbours, who in turn set out to the travel bureau to obtain the beautifully pictured folders.

Travelling through foreign lands, these people miss only one thing: the home newspaper. They stare longingly at the profusion of papers displayed by the news vendor, but all the titles and all the pages are meaningless to them. In some places they can obtain a home newspaper, and sure enough, they devour it. But in very many cases, they can't get it. Somehow, despairingly they study the headlines in the foreign papers, trying to get the meaning of those foreign words.

The headlines! This only they want. Their voyage is too exciting to give them more than a few minutes for the newspaper. If they could only understand the headlines.

Actually, if they come to think of it, the headlines are their main reading matter even at home. According to many surveys, painstakingly made in many countries, the majority of readers, spent about 15 minutes of reading time for their enormous daily paper, and what they read mostly, are the headlines only. Some newspapers, always endeavouring to give service, have now a small space on the front page, which contains a News Summary, and practical business people consider this a very practical idea and make practical use of it.

Well, this is the practical proposition made in this chapter. A small space on one page, devoted to a News Summary printed in semantography, with the native words underneath each symbol. This would acquaint the foreign reader with the native words and in turn would be a new, curious or even funny item for many readers, who, instead of perusing the crossword puzzle, would try to find out whether they can read those puzzling symbols. Newspapers of border towns or of tourist resorts could include a small space with headline news from one particular country to satisfy the many tourists from that particular country.

Benevolent readers may agree that semantography could be useful for international symbols in international traffic, railways, ships, airports and harbours, hotels and houses of amusement. International symbols are already in use on all the highways of the world (see next chapter). The arrow is recognized as a direction indicator all over the world. There is therefore a fair chance, that semantography may find a use in all kind of travel activities. Then, newspapers fostering international communication, might reserve a small space for News in Brief for Foreigners written in semantography - and be it only for the sheer fun of it, or the proof that the paper is progressive. If they prefer, they might put this item on the juvenile page. In fact, small children would easier learn to read such symbols than ordinary writing. (see later chapter).

Foreign travellers and tourists would buy the paper to learn about the spot news, if they can't read the native papers. And they would quickly overcome their fear that that particular paper is biased in one or the other direction, because - in semantography, bias is almost impossible. A child could find it out.






















The reader who has read through all chapters knows about all the symbols, expressing a human EVALUATION. He has learnt that the symbol for a man, indicates only a distinct biological entity and nothing more. Declaring that a particular specimen of this species is a rascal or a saint means adding a human EVALUATION. In semantography, this is done by adding the EVALUATION symbol, and the symbol for the human mind, which combination gives the EVALUATION good and right, or wrong and bad. As shown on page 206, these symbols, indicating a relative human EVALUATION (vague in meaning and different in meaning with different brains) are easily recognizable. Children, after a little training, can find them out.

In other words, those few lines of a News Summary in semantography symbols can be easily freed from any biased evaluation. They can easily present only factual happenings, the ACTIONS of THINGS, be they men, women, groups or nations, hurricanes and hail storms, trains in accidents and airplanes in a smash, the death of an important man and an important discovery - and this is the factual news which the reader, and especially the foreign reader wants.

If he wants to be informed about some fighting going on in any particular part of the world, he may not want, and actually ^{may}resent it, if some newspaper term the fighters rebels, or bandits, or terrorists or liberators or heroes. In semantographic symbols they appear as fighters only (see p. 286). To make them appear as criminals or brave warriors needs the addition of a symbol, which shows in clear ^{the symbol for}the mind (of the man who wrote the words). In this the foreigner is not interested, in fact he dislikes it. He wants only factual news and he may buy any paper in a foreign land, if he wants to read the summary in semantography. He is sure that such evaluation terms will be missing there.

In the following lines a sample of such a News Summary is given. Again it must be pointed out, that all the symbols in this book are grossly exaggerated in size. In usual printing they should not be much larger than capital letters of a medium sized print. The specimen below is adjusted for the foreigner as well as for the home reader, eager for a puzzle. The first line below gives the usual term, the second line the direct translation of a compound symbol. Grammar must be disregarded in some cases. In this form the foreigner learns the terms in the foreign language and the home reader learns the symbols.

<p>A SEMANTOGRAPHY PUZZLE FOR YOU Can you read the symbols below? Cover the explanatory lines and try it. 90% is excellent. 80% is good. 70% is fair. Read Sunday supplement article.</p>	
<p>NEWS IN BRIEF FOR FOREIGNERS</p>	
<p>☐☉</p>	<p>∖ H >></p>
<p>⊥P.</p>	
<p>page news (eye, ear)</p>	<p>(writing, short) for (citizen, outside state)</p>
<p>4 I P o ⇌ H Qc > Paris.</p>	
<p>Four big Powers discussions to start to-morrow in Paris.</p>	<p>(states) (page 2)</p>
<p>λ1. < ☐ λ Truman o " -! ▷ >> ✕✕ "</p>	
<p>President of U.S.A. Mr. Truman says: " No cause for war "</p>	<p>(page 1)</p>
<p>☐ - ✕λ → ii</p>	
<p>France without Government again.</p>	<p>(minus) (page 3)</p>
<p>λ Molotov, λ → > P. ^ < ☐ o -! > λ Marshal + o ~ >></p>	
<p>Mr. Molotov, Minister of Foreign Aff. of Russia said: No to Mr. Marshal's proposals.</p>	<p>(page 1)</p>

      
<p>Government of Australia announces big reduction of taxes. (much) (decrease) (percent for state) (page 4)</p>
   
<p>Fighting in Indonesia flared up again. (many islands) (started) (page 4)</p>
    
<p>The very famous singer Gagliatti was killed in an aircrash in Italy. (mouth, note) (page 5)</p>
    
<p>Hurricane destroyed many houses and crops in Florida. (100 miles/hour) (page 6)</p>

"very famous" is an evaluation, clearly indicated. "big reduction" is vague. Should be replaced by exact figures.

The above samples should prove that we can write anything with these symbols. Moreover, the symbols are simple in outline. The draughtsman can draw them up in a quarter of an hour, the blocks of each line can be quickly made and then inserted like any other linetyped line. It would be easy enough.

It would be a boon to foreigners who could read the lines in their language, be it Spanish, Portuguese, Italian, Arabic, Chinese, or any other language and dialect spoken on this earth.

For the home people it could be another enjoyable puzzle. If the crossword craze still grips the whole globe (after almost 30 years since it started) why not this enjoyable symbol riddle. Besides - and this is very important - solving these daily puzzles is a highly practical affair. The boy scouts and the girl guides could learn to write letters to all the boy scouts and girl guides all over the world. The stamp collector could start a correspondence with another or more collectors in any part of the world and would thus enjoy stamp collecting in the best way possible, by exchanging stamps, not buying them.

The worker would be able to read international specifications on mechanical and electrical drawings. The farmer would be able to read directions from international agricultural research stations, and would be able to write to outside stations, asking for experimental seeds, directions and advice, should problems arise.

The office clerk would be able to write business letters to foreign firms and to dispatch radiophoto cables (see page 266). The business man could use it for international directions on merchandise, for informations on cases, invoices, and custom forms.

The doctor and the engineer, the research worker and the scientist would be able to read foreign research reports and would be able to write letters to foreign co-workers. All this has been explained in foregoing pages and chapters.

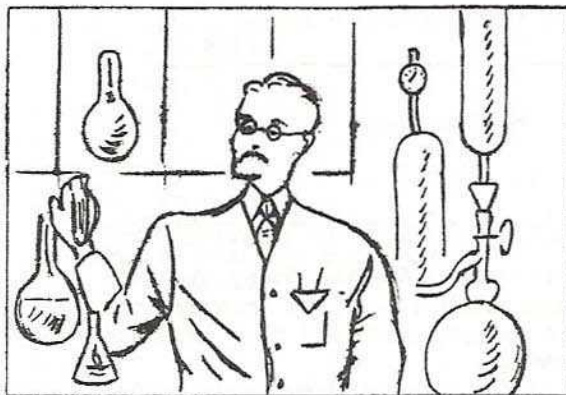
This little column in a newspaper would find so much attention from all parts of the population, that newspapers which promote it would be praised as progressive.

There is still another side of the matter, equally important. Every newspaper today carries pictures. Everyone who ever got a foreign newspaper in his hand, which he could not read, because of language, looked at the pictures and tried to get the meaning of them, comparing the small hints of the names and familiar foreign words in the caption with what he saw on the picture. We all did this at one time or another. How many times, however, have we felt frustrated, unable to read the caption and burning to get the meaning of the interesting picture?

Here semantography could come in very handy. A caption is usually a short line like the ones above, and a line in symbols beneath, would present no difficulty and would not take much space. Some illustrated magazines in multi-lingual countries print the captions in two or more languages. But here is a possibility to print a caption readable in all and any language, dialect, idiom, slang, anything.

Among all the famous illustrated magazines of the world LIFE has a particular place and the millions of United States soldiers who were sent to all parts of the world can testify how much these copies, together with copies of other magazines, are cherished in every family in desert tents of the tropics, in ice igloos of the Far North, in mountain villages in India, as well as on lonely islands in the Pacific. But all these people are illiterate. We have not taken into account the countless millions of readers in North and South America, in Europe, Asia, Australia and Africa. All over the globe LIFE and now LIFE INTERNATIONAL is looked at lovingly by all the members of the family, except the baby to whom it is not given, as he would tear up the precious copy. And all the people who cannot read English are sorry for it, because they miss a great part of the fun in looking at the pictures.

Herebelow are a few specimen of pictures with English captions and the symbol line beneath. On strong, smooth, white paper the symbols could be much smaller in size than here.

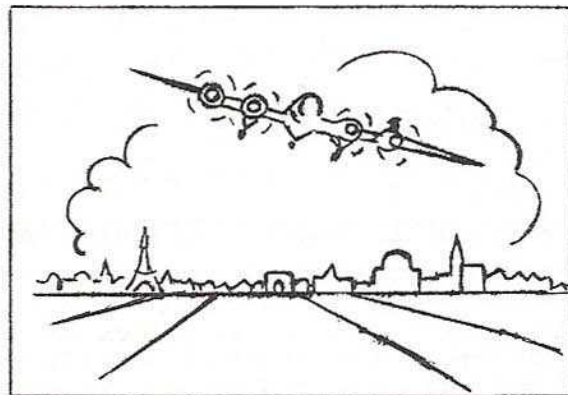


The scientist Dr. Fleming, discoverer of

Dr. Fleming, >

Penicillin in his chemical laboratory.

Penicillin, >

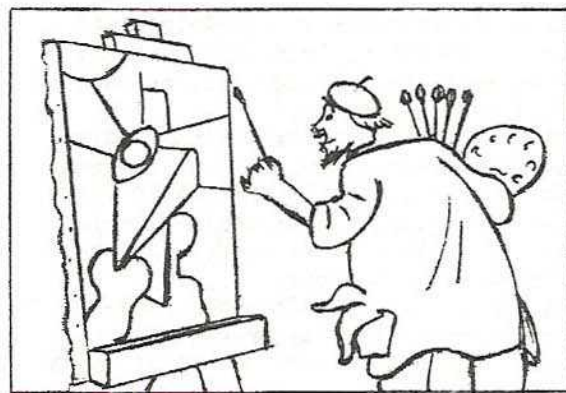


The airman John Ross, after circling...

John Ross |

the globe in 73 hours, arrives in Paris.

73 °, -> Paris.

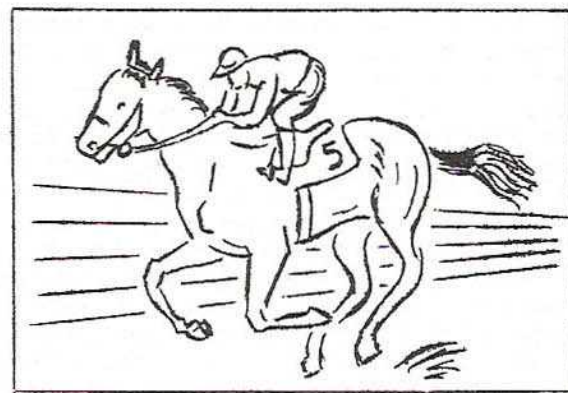


The artist Frilasso before his picture

Frilasso |

He says: "I myself don't know, what it de

pics



The stallion Bernborough (owner L. Fayer)

Bernborough (L. Fayer)

is first in 50,000 \$ race at Santa Ani-

ta.

There is another advantage. Not only would people of all nationalities be able to read the captions in all their mother tongues - they would learn the English words too. Looking into French illustrated magazines, they would learn the French words. This is

actually the best method to learn foreign languages and educationalists have long ago realized this in issuing language text books with very many pictures. The first books, a 3 years old child gets, are picture books with letters and words in alphabetical writing: A for Apple, B for Baby, etc.

We all know that the sometimes practiced method of learning vocables by repeating the vocable in both languages "pomme-apple, pomme-apple, enfant-child, enfant-child" is not an efficient one. The better way is to look at a picture of an apple, a child and read the foreign words. Otherwise, we are always forced to translate in our mind every word.

Just as picture magazines and illustrated newspapers are inventions of the recent past, so is the picture book for learning the native and foreign languages. Newspapers and magazines in adopting the use of semantography for captions would thus contribute immensely to an easier way of learning foreign languages. They would follow the great idea of a man, who invented the language picture book, and whom I should have mentioned in previous chapters. I may now pay tribute to a great man

J o h a n n A m o s K o m e n s k y

called

C o m e n i u s

Moravian Bishop and Educationist

1592 - 1670

who wrote the first pictorial schoolbook

O R B I S P I C T O R U M

He was the first man who recognized the educational value of pictures and he became thus the father of modern pictorial education and modern pictorial journalism.

In adopting the use of semantography for captions, modern newspapers and magazines would thus greatly foster the spread of inter-linguistic understanding and would thus continue the work of Comenius in educational enlightenment.

There is great danger that some critics would write an article, utterly ridiculing semantography and condemning it as a crackpot idea. Such critics should realize that they themselves run great danger to ridicule themselves. Too many crackpot ideas of the recent past, the railway, the steamboat, the airplane, and even the umbrella have been condemned by the expert critics of that time.

There is ample proof that a symbol writing is not only a workable idea, it is a practical reality even in the countries of Western culture. There are the highway signs on the motor roads which are readable in any language of the world, indicating directly the real meaning. There is the International Flag Symbol Code on the high seas, readable in any language.

Where there is a matter of life or death, the nations of the world have found symbols/ to be the only possible means to overcome the language Babel.

And there is mathematics. The business section of a modern newspaper, containing the market reports, share tables, index numbers, etc. are full with symbols readable in any language. Symbol writing is already a practical reality in modern newspapers.

Newspapers have to meet terrific costs in getting the news. They must be run according to business lines. Yet, there is the fact, that the people can buy their daily paper at a price much below its actual cost. This is made possible through the income by advertising. Now, if symbols of semantography come into use in towns and ports with an international traffic, not only the traffic police, the fire brigade, the hotel trade will use symbols, but also the owners of shops and stores (see examples on page 257) They, however, are the great advertisers. It might be that symbols will first appear in advertisements; it might be that the editors will start the idea. But come it will.

The author is very anxious that the men of the press should share with him the view on a symbol writing to overcome the language barrier. He fears the enemy of all newspapermen: the lack of time. Newspaper people are very harrassed, day and night by that "split second". It might well be, that the reporter assigned to write a critic about this idea and this book, would lack the necessary time, even "to thumb carefully" through

(356)

the chapters. It might well be that he would be compelled to read only this chapter. For him I would like to print herebelow some quotations of expert opinion, parts of which have been cited in foregoing chapters.

Professor Basil Hall Chamberlain (1850 - 1935), famous sinologist and japanologist, author of many books wrote in 1904:

"Ideographic writing apparently possesses some inherent strength that makes it tend to triumph over (without entirely supplanting) phonetic writing, whenever the two are brought into competition in the same area...."

The most obvious of the causes is the superiority of the existing written language to the colloquial as a terse and precise instrument of thought. Supported by Chinese characters, Japanese writers can render every shade of meaning represented in the columns of a European newspaper or the pages of a technical European work, whether financial, diplomatic, administrative, commercial, legal, critical, theological, philosophical or scientific.

(phonetic against symbol writing)
In Europe such competition has scarcely taken place, except in the case of the symbols for the numbers and a few other ideas; but there, too, the general law has asserted itself. Which is the simpler, the more graphic, the more commonly used - "three hundred and sixty-five" or "365", "thirty-five degrees, forty one minutes, twenty-three seconds" - or "35° 41' 23", "pounds, shillings, and pence" or "£.s.d."? Doubtless an ideographic writing is infinitely more cumbersome as a whole than its rival; but it is easier in each particular case. Hence its victory."

He dispels the belief: "the often-repeated assertion that the ideographs waste years of school life is simply not true. Any language is assimilated equally well in early childhood." Professor Krause quoted Chamberlain having said: (9)

"Ideographic writing will surely achieve the final victory over phonetic writing."

These are the words of a modern professor who lived in the East. Now, here are other words of a modern professor who lived in the West. Sir Richard Paget, a physicist, wrote in 1930: (3)

"We are in the alarming position of having enormous control over the forces of Nature, and very little reasoning power to guide our actions - in fact, very much like a lot of children playing with loaded guns. Man, it appears, is still constantly handicapped... by his muddled way of thinking. May it not be that much of this unreasonable muddle is due to the simple fact that our symbols for thought - language - are not yet set in order; that in the matter of thought symbolism we are still in the same state of confusion as the Romans were in their arithmetic...? We should be horrified nowadays at the difficulty of multiplying MDCCCLIX by LVII; to the educated Roman it seemed natural and inevitable, but his arithmetical powers certainly suffered in consequence.

Human thought requires an efficient method of symbolism such as no language yet supplies... This idea also is not new... Leibnitz (1646-1716) realized the need of a reformed symbolism and method of thought. He imagined a universal symbolism of thought which would be understood by all nations, and by which thought itself would become accurate and quantitative."

However, Leibnitz the philosopher and mathematician, the inventor of the infinitesimal calculus, never attempted a practical realization of this idea. In 1922, the two semanticists, Professor C.K. Ogden and I.A. Richards, authors of the standard work "The Meaning of Meaning" said, that "this speculative construction... still remains where Leibnitz thus left it."

Now, we know the definition of "what is News?" If a man bites a dog it's news. And if a man makes a fool of himself, this too is sometimes news. Well, I declare - in full realization of the ridicule and derision ahead - that I believe to be the first man who has realized the dream of Leibnitz: the creation of a simple, practical method of thought symbolism which would be understood by all nations, and by which thought itself becomes accurate."

I hope that you, men of the press, who are always the first to realize something new, will give this idea the publicity it deserves, for better or for worse. No doubt, the assertion that: a writing in these symbols is readable in all languages of the world - is phantastic and fascinating. To this comes the assertion that: it will make better thinkers. Here is a job for the press and I may end this chapter with the preamble of your Code:

"The primary function of newspapers is to communicate to the human race what its members do, feel, and think... To its opportunities as a chronicle are indissolubly linked its obligations as teacher and interpreter."

A MATTER OF LIFE OR DEATH TO MANY MILLIONS.

UNIFORM SIGNS ON THE MOTOR-ROADS OF THE WORLD

"The committee deplors the independent procedure of certain jurisdiction in the solution of shapes and color combination at variance with this standard, and hopes the importance of complete uniformity will be increasingly recognized." (36)

American Association of State Highway Officials Washington

On page 71 I have written a chapter "What will happen to this idea, if no one takes a lead." There I pleaded that a great foundation of a great country should take a lead and initiate semantography for the universities, for public signs, etc. I pointed out, that, lacking such a lead, different sign systems will be evolved in different countries, which would result in international confusion.

That this is no idle phantasy, I proved with an array of highway signs in different countries, under the title "The Babel of Highway Signs" - "A potential source of accidents". Not only are the geometrical signs different in different countries, and even in different states of the United States, but many countries use only words on many signs which are not understood by a foreigner and even difficult to read in bad visibility for the native motorist.

This is a matter of life or death for motorists and pedestrians - nevertheless there is no uniformity. Why?

The answer is plain enough, if we look to the precedent of the International Flag Symbol Code. There were many codes on the high seas, until Great Britain, a great naval power evolved the most up-to-date code for their naval and merchant ships. Quietly all the other nations adopted it, because it was the most sensible thing to do.

The official in each country responsible for the design of highway signs in his country must be well aware, that one day he will set out to an international conference where they will all agree on uniform signs for all the motor roads of the world. A start has already been made by the former League of Nations and some uniformity has been achieved in many European countries. But in the world as a whole, Babel still reigns.

The fact is that no system has been yet proposed, which could solve all the problems of sign communication on high roads. Most signs are very arbitrary, and open to rational argument. And there is the dreaded inevitability that most signs in all the countries would have to be altered.

But if a system would be proposed, which could solve all the problems, which could convey all the meanings in geometrical symbols independent of any language, which would be the least arbitrary, such a system would have a good chance to be adopted. All the highway officials in all countries know for certain, that one day they will have to alter many of their signs in conformity with a system valid for the whole world.

Uniform signs for all the motor roads of the world will and must come as sure as the to-morrow will come. The question is: when? The answer is: the sooner the better.

A plea is made for ^{even} semantography. Not only can it satisfy all the demands of geometrical representation. It can, say in plain symbols: slippery road, freshly oiled, ford, etc.

It can be used for the expression of any meaning in the garage, rest house and restaurant. It can be used for written conversation with the traffic police and with natives. (p. 337)

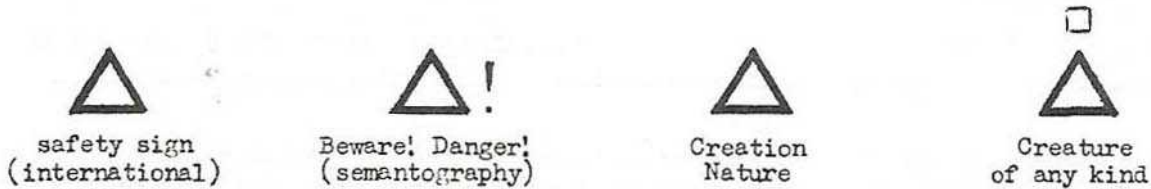
Moreover, the motorist can use it everywhere; when shopping in a department store or going to the cinema. The signs for fire escape, exit, as well as for ticket counter, cashier, wrapping counter, etc. are basically the same as those on the highroads.

The author begs therefore all traffic officials and all motorists to give this chapter their unprejudiced attention. It is their life which is at stake and we all know that a "streamlining" of international motor road signs is long overdue.

The following signs cover most of the necessary meanings. The reader-motorist will find that many are already in use in many countries - simply because their geometrical outline solves the problem and conveys the meaning perfectly. In other words: many traffic officials have already devised the best symbol possible.

The following is only a proposal, ready to be altered by an international body.

The reader has found (already in previous chapters) an international traffic sign, which however has been interpreted differently in other chapters.



Many considerations in regard of religious meanings have forced me to adopt the triangle sign in conformity with age-old religious symbols. (see the chapter of "Creation and Creator"). On the other hand, there was this established highway symbol for Safety.

Then a flash of thought dispersed all the worries of ambiguity. Why, this is the most suitable symbol for highway signs. It even takes on a religious meaning there.

If we agree that the international triangle on highways means also Creation and Creature, it is nothing else than a warning to the motorist that he himself is part of Creation, a Creature, and so is the motorist in the other car, and so are the people he has in his car and the people in the other oncoming car, and so are all the people on the street and on the sidewalks, Safety for the Creatures! You have no right to be careless with your own life and with the life of others. You have a family and so have the others. You came into the world by a miraculous act of Creation and so came your children and the children of others. You may call it an act of God, the Creator. If you are an unbeliever, call it an act of Nature. It's a word ^{only} and it does not explain anything.

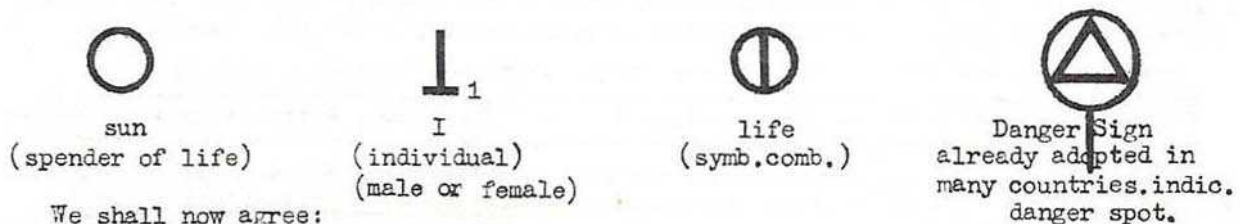
In other words, this established motorist sign, interpreted as a symbol of the system of semantography takes on a higher, almost religious meaning:

"Thou shalt not kill!"

But the interpretation goes even further. The indicator for THING on top of the symbol indicates any THING, created by Nature, Creation. Not only a living creature, anything is a creature in the widest sense, a beautiful crystal, as well as a wonderful rosebush. Just as a rosebud is a marvellous creation, so is a bee, and so is a child - and so is even a marvellous, gleaming car, with all those wonderful inventions, from the carburettor to the liquid driving gear, from the battery charger to that most wonderful instruments of all, a radio, which is ample proof that man is created to God's likeness with a brain which enables him to create unheard of things.

So, our symbols does not only warn us to beware of the lives of others and of ours. It says also that we should not destroy any other "creature", a rosebush or our car, both precious and beautiful.

Now, highway signs are painted on tin plates of different shape. Some are circular, some are of a square or octagon design. In different countries, even these outlines have their special meaning, discriminating between mandatory or non-mandatory signs, etc. Here again semantography could help us to a uniform interpretation.

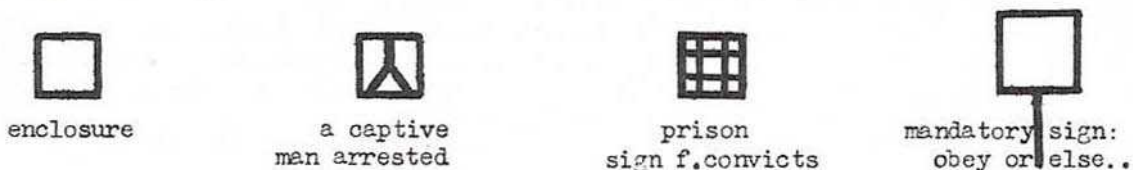


We shall now agree:

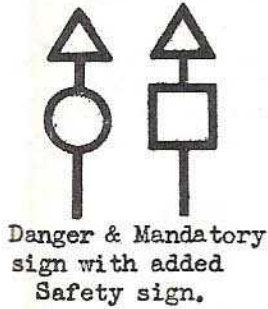
Danger signs should be painted on circular sign plates.

The above combination of circle and triangle should be used by itself to mark a special danger spot. It could be used as a marker, some 100 yards before the actual sign.

If circular plates should be used to indicate a danger for the motorist, a danger to his life, square sign plates should be used to indicate a danger to his freedom. Disregarding such a sign he will come into conflict with the authorities and be locked up.



We shall now agree:



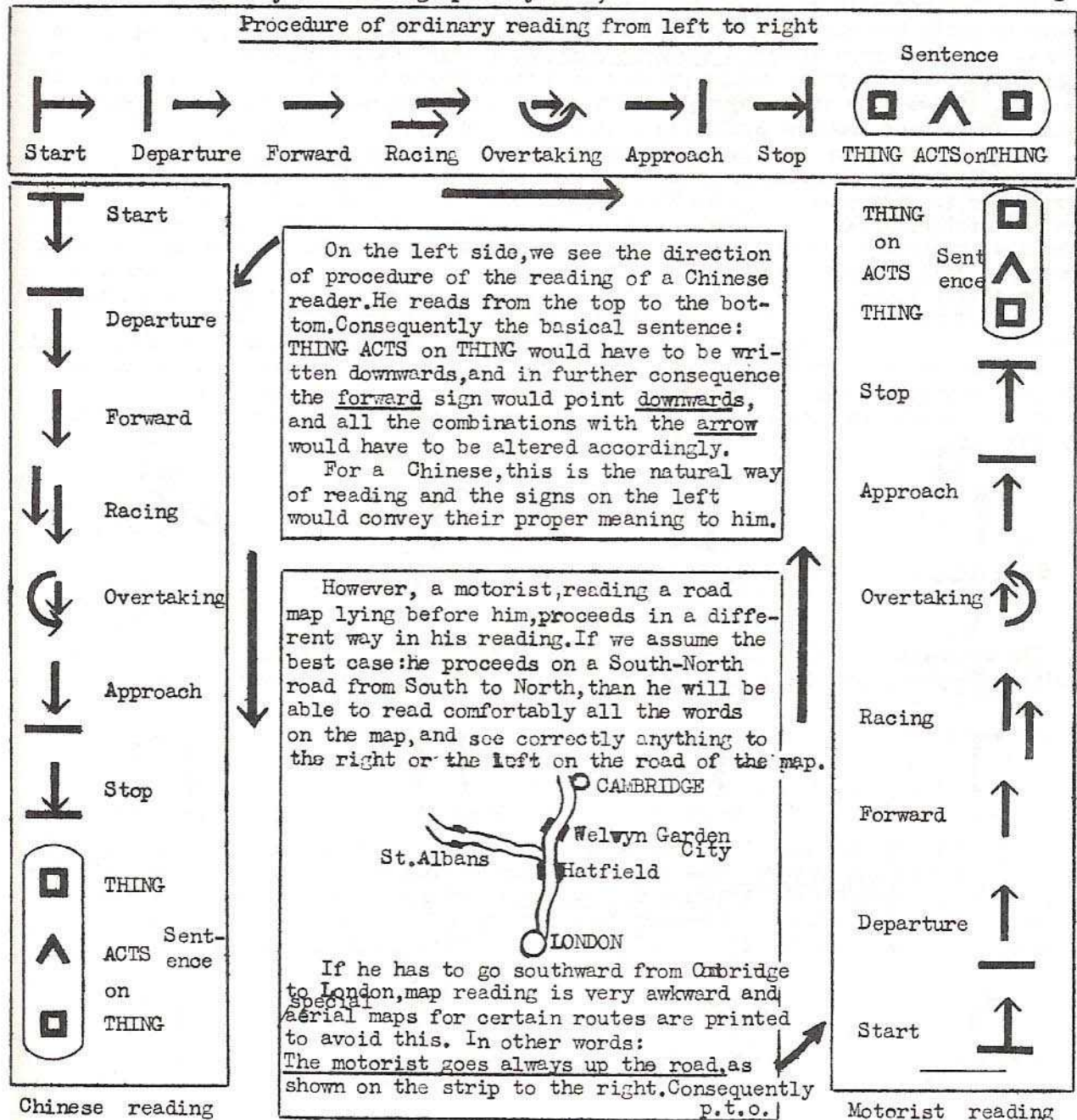
Mandatory signs should be painted on square sign plates.

It is clear that ^{No} a parking sign should not indicate a danger to life. But it should indicate a danger to your freedom. It means punishment if you disobey this sign. Such signs should therefore be painted on square plates.


However, we are free to combine the signs, and signposts ^{as} depicted on the left, with the triangle safety sign on top are already used in many countries. They should be used for mandatory signs, which include a danger to life.

We see already that no great expenditure will be involved in many countries, because most signs have already the indicated outline. Even repainting would not be necessary, as many of the signs shown later, are already used in many countries.

However, we must now analyse the peculiar way in which a motorist reads a road map and reads road signs. This peculiar way is different from the reading we normally do. Let us write an array of semantographic symbols, as we would read them from left to right.



THE ARROW SYMBOL IS ALREADY USED THE WORLD OVER

Consequently the meaning of forward on a road sign is expressed by  a vertical arrow. This is only natural and already in practice on road signs in many countries. There should, therefore, no difficulty arise between these different displays. A piece of paper is a different thing and a road sign plate is again a different thing. To make sure that no misunderstanding could occur, we could use the road sign outline in semantography and write the symbol within the circle, or if this is not possible next to it.



symbols for different road sign posts, to be used in written semantography reports



straight on

symbols to be used in written notices for motorists on boards (although the notice is written horizontally). The symbols represent the actual road sign post.



stop

In other words: if we print some directions for motorists on a leaflet or map, we have to write horizontally. The meaning of forward will then be displayed by the above shown vertical arrow within a signpost outline. In this case, it cannot be mistaken for upwards. A similar symbol can be printed on a map, showing the exact position, where such a sign stands. Many of the symbols below could be used on maps, and in fact, map-makers have always used outline symbols to indicate a windmill, a road sign, etc.

After all these preliminary explanations we shall now devote our attention to the proposed symbols below. The motorist reader will many of them recognize as already in existence in different countries. Here they are all printed in black and white. The international congress should then decide on an international colour scheme, equally effective in daylight or at night, for instance, yellow lines on blue background. The lines could be laid out with little spherical mirrors as already in use for night driving.

In the following displays the circular or square rim of the sign plate is omitted.

The author is anxious that the motorist reader should not reject these proposals. In many cases, the knowledge of the previous chapters is essential. No prejudice, please!

It would be wise to have the meaning of the symbols printed in the native tongue beneath the symbol. However, this could be done in small type, as its purpose is only to acquaint the native with the symbol meaning and the foreign motorist with the native word.



Straight on
forward



You approach a stop
or dead end. This symb.
to be used as formarker.



Stop



Stop!
Look! Listen!
(eye) (ear)

The following symbols for left and right are those used in ordinary semantography writing. They are the simple outlines of road signposts, as used for town names.



Left



Right



Keep right



Keep left

One day, all cars in all countries will proceed on the same side of the road. In the United States and in many other countries they proceed on the right side. We shall devise special symbols, ^{in coming paragraphs} for instance Overtaking, assuming that the right side of the street is used for driving forward. The following symbols are independent of this. They are already adopted in many countries. For ambiguous signs see page 71.



soft curve
to the left



soft curve
to the right



sharp curve
to the left

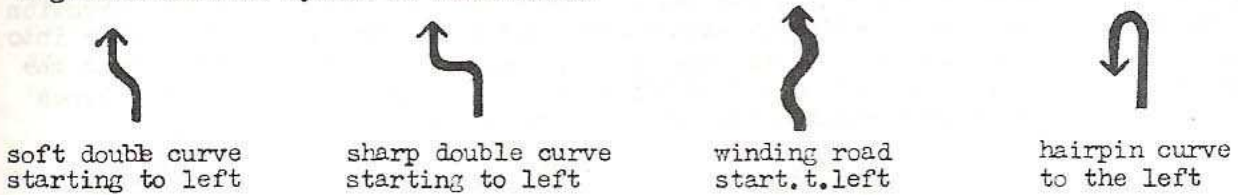


sharp curve
to the right

THE LINE SYMBOL FOR INDICATING STREETS AND HIGHWAYS

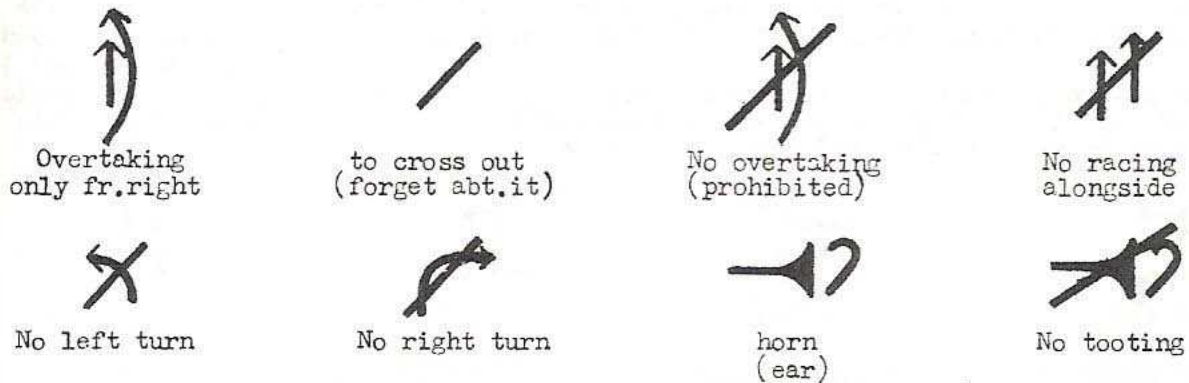
493
(361)

In some of the following symbols we shall not show both symmetrical symbols for right and left. One symbol is sufficient.

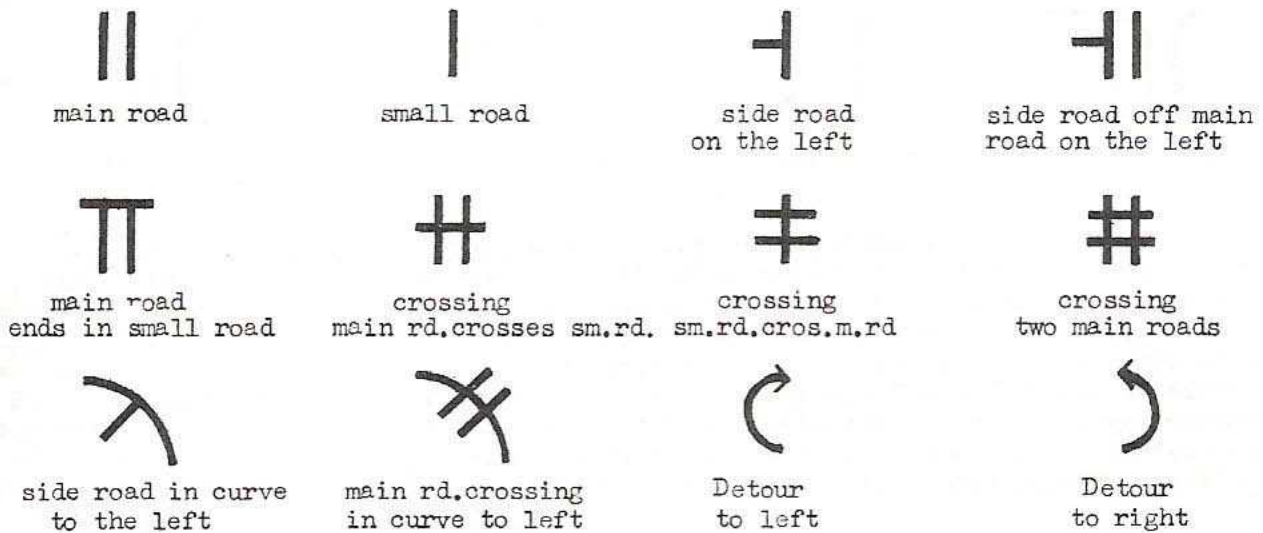


The similar symbols for curves to the right show the starting turn to the right.

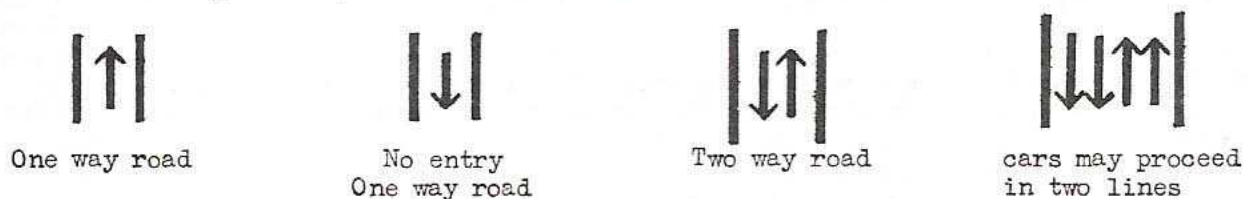
In the following symbols, we shall use the oblique line, which has been used already in highway symbols for No! No Parking R No tooting, etc. We use the oblique line in semantography too to indicate to blot out, to cross out.



We are now coming to the symbolization of main roads (two lines) and smaller roads (one line), to sideroads and crossings.

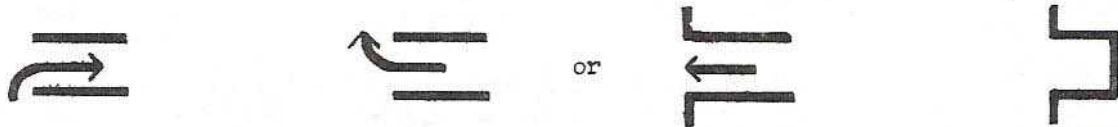


Please note that the road lines do not carry the arrow head. This is important for the next symbols, in which the road lines are widely separated, allowing space in between for other symbols. The outer rim of square sign plates may be used to indicate the road lines, provided, that a thick dark line is drawn on each side of the square.



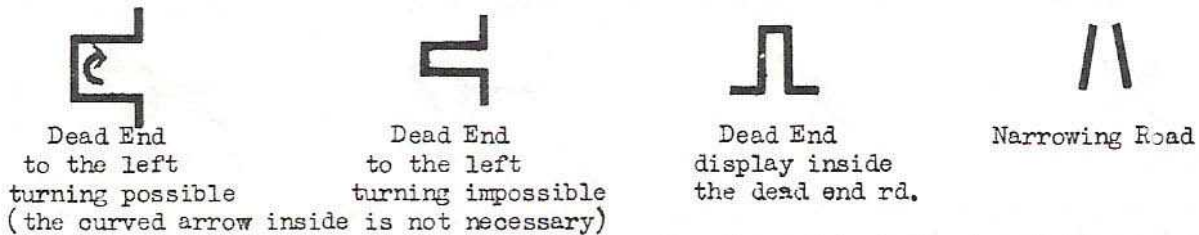
Whether the last symbol with 4 arrows is necessary, the traffic experts may decide. I have shown it only to prove that this meaning can be symbolized too.

We need, however, two different signs for One way road. The one shown on the previous page is to be displayed along the one way road, because the lines follow the direction of the road. But we need a different sign on the spot where the one way road runs into the main road. This sign must be displayed on the corner of the main road, so that the motorist can recognize it, before he turns into ^{the one way road} ~~it~~. Here again the displayed outlines follow the natural road lines. We could choose between two different displays.



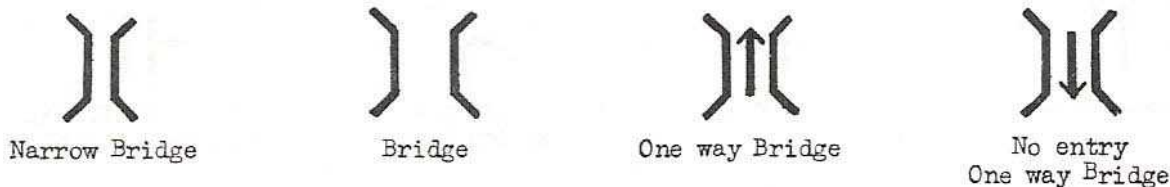
One way road side street right (these signs are to be used on the corners of side rds. which don't cross over) No entry One way road (this sign is to be used when one way rd. crosses road & continues to left) No entry (to be displayed on corner. Inside the dead end road sign/turned 90°)

The international body shall decide about the exact length and width of the displayed lines. We could even distinguish between a dead end road, in which turning is possible (the road is wide, as displayed above) or narrow.



Dead End to the left turning possible (the curved arrow inside is not necessary) Dead End to the left turning impossible Dead End display inside the dead end rd. Narrowing Road

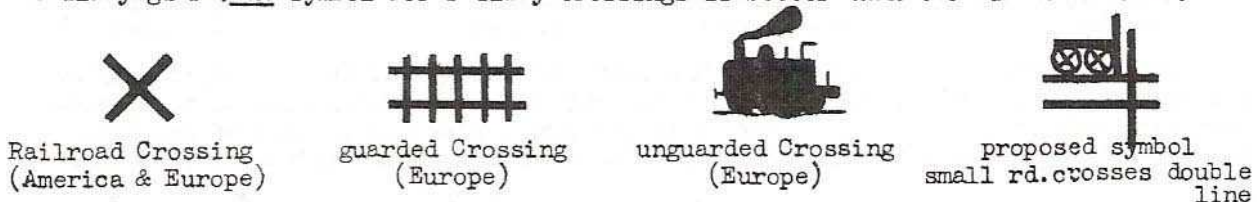
The next symbols would tally with those already used to indicate a bridge.



Narrow Bridge Bridge One way Bridge No entry One way Bridge

We are now coming to the important symbol for a railway crossing. The symbol X is used in the United States and in some other states. However, it is not true to the road map in so far, as the lines do not follow the actual crossing lines which are: +

In many European countries, the symbols show the picture of a gate and a locomotive. These symbols have been agreed upon by a committee of the former League of Nations. These symbols are shown below. The gate symbol may be adopted in this scheme. However, the new proposed symbol shown below could be used for both, guarded and unguarded crossings. The motorist should not rely on a gate to be closed. By mistake, it may be left open by the railway guard. One symbol for railway crossings is better than two different ones.



Railroad Crossing (America & Europe) guarded Crossing (Europe) unguarded Crossing (Europe) proposed symbol small rd. crosses double line

All the above already used symbols serve their purpose well. They are all geometrical and easily understood. The committee may decide. The least suitable, however, is the X. The symbol for engine correspond with the semantographic symbol. Moreover it is simpler in outline than the black patch, showing the outline of an engine as used in Europe. Nevertheless, this symbol may remain, as long as the sign plate needs ^{no} new painting. The next symbol shows the semantographic symbol for an electric tram or engine. This symbol could be used too in the above symbol for Crossing, should the line be electrified.

Much attention must be given to these symbols, because railroad crossings account for many fatal accidents. The same symbol should be shown ^{in succession} twice. In Europe the symbol is shown

first abt. 215 yards (240 m) before the actual crossing. The post carries three red oblique stripes. Then two markers appear, one with two oblique red strips, the last with one stripe only at intervals of 160 m and 80 m before the actual crossing. Whereas the actual symbol and the next marker stands on one side of the road, the last marker stands on the other side.

The committee may decide uniformly about all these details.



electric tram, engine
(in semantography)



tram pinch



First Aid
(international)



Hospital
=sick (knees drawn up)

The next symbol, showing the wheel and the earth line is the semantography symbol for movement. It could be used to indicate the allowed speed. Up till now various words are used: SLOW, GO SLOW, DEAD SLOW, APPROACH WITH CAUTION, etc. etc. The reader, who has acquainted himself with the foregoing chapters on human EVALUATION words knows, that slow, very slow, dead, slow, caution, etc. are very vague in meaning. Only mathematical figures can overcome this, as shown below.

As long as the world is "divided" into miles or kilometers it will be necessary to add a letter m. or km. But I hope that the international committee will adopt that system which is already international in all scientific measurements: the metric system.



movement
(in semantography)



speed limit: 5 km
(proposed sign)



speed limit: 30 km
(proposed sign)



motor vehicle, any kind
(semantography)

The subline: (semantography) is printed for the reader, who has not read through previous chapters. It indicates the symbol of semantography, as to be used in the proposed international road symbol. This procedure will be followed in a few examples below.



Closed (stop) to
motor vehicles only



Closed to all
vehicles



day
(sun & earth)
semant. combin: holiday



joy



Closed on
holidays



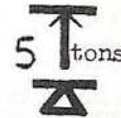
bi-cycle through
(semantography)



bicycle path
only bicycles through



scales, balance
(semantography)



Closed to vehicles
weighing over 5 tons



length (width)
(semantography)



Closed to vehicles
over 2 meter width



door
(semantography)



Underpass
Clearance 3 m

We are now coming to the semantography symbol for water, a wave outline. Oil is depicted by two wave lines, indicating the liquid which floats over water. Water =



Ford
through water
(see next page)



Slippery Road
liquid on ground

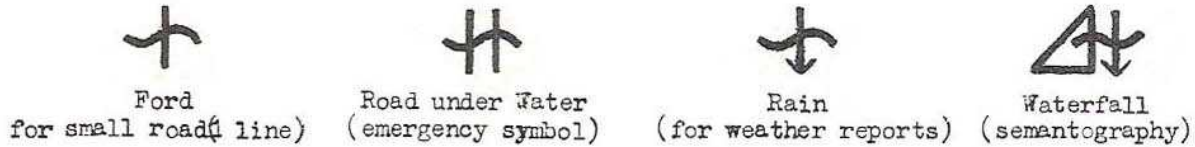


Freshly oiled
(symb. for oil)



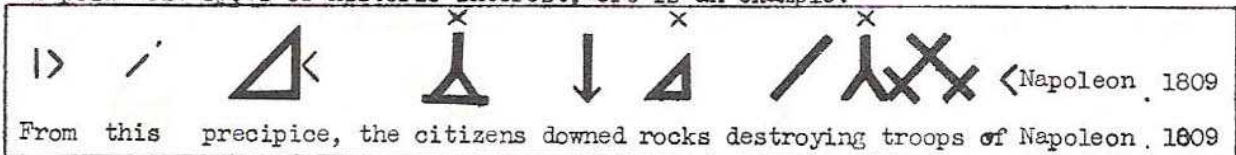
Water available
Tank, tap, hydrant, etc.

Now, this sign for Ford worries me a bit, because in semantography it indicates steam = water going up in contrast to rain = water coming down. The symbol for rain could be well used in weather forecasts for motorists. The symbol for steam however should never come up, I suppose. Nevertheless, here it is shown, how we can solve the problem by devising another symbol.



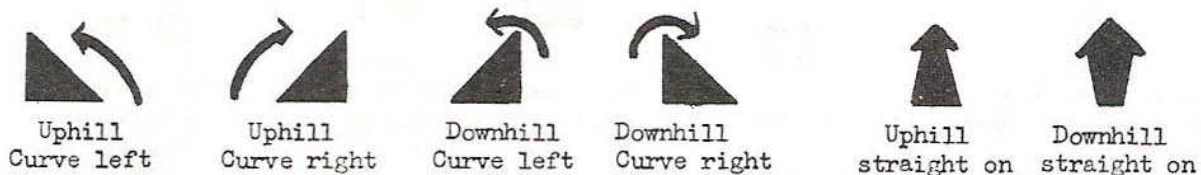
The sign for waterfall may be useful on mountain roads, where very often a small cascade could become a dangerous thing to be better watched. Moreover, such a road sign would be appreciated by the motorists who want to enjoy the scenery. A grandiose water cascade in a beautiful gorge is usually overlooked, when flitted by in a motorcar.

If the Tourist Department of a particular scenic country decides to put up road signs to indicate and mark spots of interest, semantography may be the best medium, even to point out spots of historic interest. Here is an example:



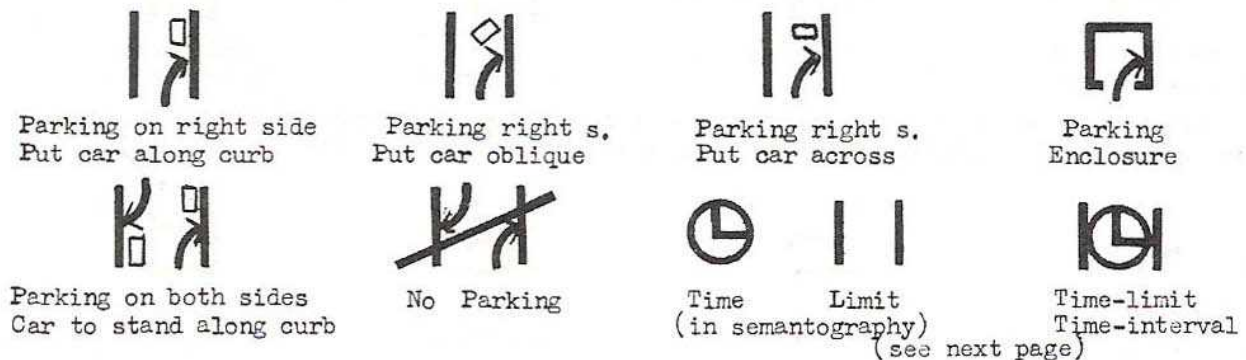
Well, such an inscription could be read by motorists in any language. With the words in the native language underneath, motorists would be grateful to grasp the meaning of words in the native language.

We are now in mountainous country and should devise symbols to indicate uphill and downhill, as well as curves uphill and downhill. The existing signs are unsatisfactory. Proposals for better signs have been made and some are incorporated in the symbols below. Please, peruse the existing signs, displayed on page 75.

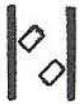


We are now coming to the symbols for Parking, Parking prohibited, and Parking allowed for a certain time interval during a certain time of the day. These signs are most important for crowded cities.

There is already a very good and simple sign for Parking P and No Parking R. However, the symbol could be improved. It could be made wholly geometrical and it could be made to indicate the particular side of the road where parking is allowed, and in what direction the motorist must approach the curb. It could also indicate the way the car has to be parked: along the curb, perpendicular to the curb, or oblique to the curb.



On second thought, I believe that we may omit the arrow in the sign for parking:



Parking (oblique) on both sides of road permitted.




Sign down road
Parking alongside curb allowed between both signs on this side of the road. Motorist can quickly ascertain where the other sign stands, and thus recognize the allotted parking strip.



Sign up road



20' (9 - 17°) 
20 minutes parking time between 9 - 17 o'clock on workdays.

Some necessary symbols have already been shown in the chapters on hotels, restaurants, and other public places, a few signs are new auxiliary symbols. Other symbols could be easily invented.



Man at work (man & hammer)



Road under Repair (road interrupted)



toll bar



Customs toll bar of state (flag)



Children (School) symbol f. young (p.274) (looks like little child)



Look out! Bad Corner! (right) (eye & exclamation mk.)



Garage (House f. Car)



Mechanic (symbol f. machine)



Telephone (speech, mouth, elec.)

























Stretcher (sick = knees drawn up)



Wreck Crane



Gasoline (liquid for movement)

						IOWA
YOU ENTER NOW THE STATE OF IOWA						
						
			: FOR DRIVING THOUGHTLESSLY FINE or PRISON			
LAW of STATE:     : 1 - 20  						
FOR HARM TO PEOPLE: 1 - 20 YEARS PRISON						

In all civilized countries there are regulations, which oblige public and private enterprises to put up legible warning signs in all places where there is danger to life and property. I am unaware about the legal situation in different countries (with a multi-linguistic population or international tourist traffic) in regard of the language of the warning signs. It may however be found expedient - if semantography is accepted - that signs written in and one native language could be acknowledged as fulfilling all legal requirements.

I put this proposal for uniform highway signs for the whole world before all concerned. It is a system completely independant of any language. It is free from arbitrariness. Anything can be said and expressed in it. It could be easily taught also to illiterate people - because it shows the outline of the real things.
More people die on the roads than in all the wars. This is a matter of life or death.

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EMERGENCY SIGNALS TO SHIPS AND AIRCRAFT.

"The edition of the international code of signals was put to a very severe test during the 1914 - 1918 war. Ships of various nations came into contact with one another and had to exchange messages during operations for mine sweeping, patrolling, convoying or examination. The book did not stand the test. It was not international. It was found that, when conveying messages word by word, the occasion upon which signalling failed, were more numerous than those when the result was successful." (81)

From the preface to the 1931 International Code of Signals

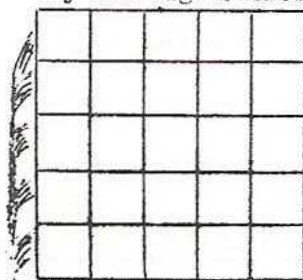
The following suggestion came into my mind. Semantography symbols could even be used for ^{emergency} communication at sea or land. People in distress and lost, could lay out the simple lines on the ^{or deck} ground, to be read by a circling rescue plane.

There is an advantage for sea communication, which could fill a gap, when other communication possibilities have broken down.

The old and approved communication at sea is by flag symbols, which have been repeatedly mentioned in this book. Very common signs are known to any sailor, as for instance the P flag, the blue Peter, indicating Departure. However, in most emergency cases, symbol combinations must be hoisted, which must be looked up first in the Code. In an emergency case, the code book may already be submerged.

Then there is radio communication. If the operator is a casualty, this is out too. Furthermore to converse in Morse Code, a language is necessary. Captain ^{of Non-English ships, etc.} and operator are supposed to speak English, but they may be very bad at spelling, and misunderstanding may occur. Of course, international signals could be sent by telegraphing the letters of the Flag Symbol Code (each flag represents a letter). But if the Code too is a casualty?

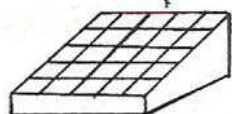
Now here is my suggestion for an electrical device, independent of the ship's electric circuit, and for a much simpler device, consisting of a white board divided into turnable squares, to compose the symbols. I maintain that this new ^{electric} signalling method could be much quicker than with flags and even quicker than with radio morsing. Against the disadvantages of flags, which are invisible at night, in bad weather and when the wind blows the flags towards the receiving ship, this new semantography system can be operated at day and night. Here below is an incomplete rough sketch.



Signalling Board 5 x 5 ft

The non-electrical signalling board, to be operated by hand, consists of 25 wooden squares, painted white on one side and black on the other, each turnable, like the devices used for similar boards in olympic stadions, to announce the winners and the time. There, each ^{square} carries a letter or number on the back and is turned around by the men, operating behind the signalling board.

The electrical signalling board is composed of 25 boxes, each 1 x 1 ft (as shown here). Each box contains a powerful lamp in a reflector. A softly frosted glass plate covers each box.



Electrical operating panel (drawn in perspective) consisting of 25 small metal squares, each insulated from each other and each connected by a cord with its respective lamp on the signal board.

Stencil (to be held in hand) with metallic point, connected by a flexible cord with the circuit. If the operator touches one little square on the panel, the respective lamp lights up. However, the lamp would ^{on} go immediately the metallic stencil leaves the square. To avoid this, a relay is put into motion, so that the lamp stays bright. The operator traces the symbol on the panel and the respective lamps flash up until the whole symbol stands out in bright lines visible in day or night.

The symbol completed, the operator turns a switch, which puts the relays out of action and all lamps are switched off.

Instead of this mechanism, each lamp may be switched on and off by an individual switch to be operated behind the board. However, this would be slower than the quick tracing.

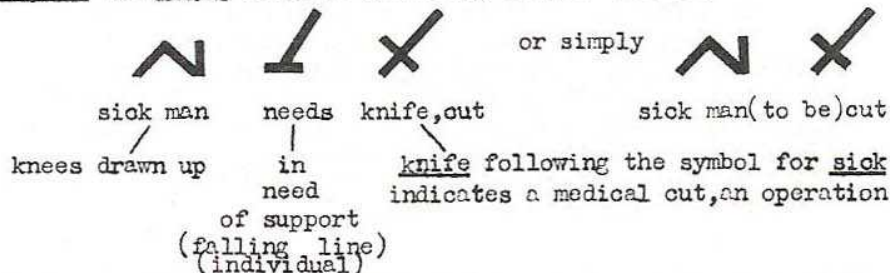
Relay Box
operating 25 relays, one for each lamp circuit.

Electric battery
for emergency case

Connection with
main circuit for
ordinary signalling

With such an electrical device we could flash the symbols as shown below, signalling that a sick man is on the ship, indicated by the outline of a man laid down and with his knees drawn up in pain (as sick people do). The second symbol indicates an individual in need of support (leaning line in danger of falling) and the third symbol shows the clear outline of a knife.

Now, no one could mistake these three symbols as a message that a sick man needs a simple knife. Of course he needs a knife, but a surgical one, and there can't be any mistake with anyone, who has a little training in semantography. We may even dispense with the second symbol. Sick man and knife would be perfectly comprehensible.



We could, of course, add the symbol for medical (see later chapter) but this is not necessary. In the later chapter, other medical symbols will be shown, which enable the signaller to point out in additional symbols which part of the body is affected, and further details as to fever, patient unconscious, etc.

Even, if such a signalling board is missing on a ship, a makeshift board or sails, etc. could be set up with the emergency message painted on, or indicated by wooden boards. The symbols are vivid, and provided that semantography is internationally used, even passengers could read the symbols and operate a signalling system.

In a later chapter it will be shown, that the symbols of semantography are ideally suited to teach children in the kindergarten reading, before they start with the alphabet in the first class. They draw pictures of people, of the moon and the sun, etc. anyway. They would not have difficulties in acquiring the rudiments of semantography.

Today, the airplane is the only means of communication with remote areas. It is a common practice in the north of Canada and Alaska to communicate emergency messages to the passing airplane by laying out some signs on the ground.

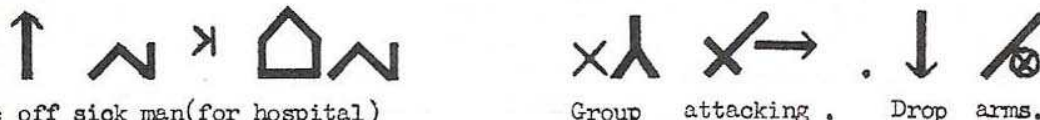
However, they have only a few agreed signs at hand to say, that they need help. Only in a few cases of rescue are walkie-talkies at hand to be dropped to the lost party, hoping that somebody can operate them.

The symbols of semantography could be traced in snow, trodden on, in the sand of the beach, laid out with logs and boards or strips of fabric. They could even be burned off in grass spread with gasoline. They could be formed by 8 to 10 people who would change position to indicate the outline, just as children form full words in pageants.

This is not a crackpot idea. This is a very practical proposition for a common situation in remote areas.

And don't forget the main point: the independence of any language. Eskimos could signal to an English speaking pilot. A French expeditionary party could signal to a Siamese pilot, etcetera. And the pilots could drop messages readable in any language.

Here are a few samples of messages to be laid out on the ground. In order that the pilot should not read the message upside down, a continuous line must be drawn underneath the symbols, although a pilot circling around the message would soon be able to read it.



The additional "for hospital" is unnecessary. (natives)

This is a very practical proposition, worthy of serious consideration.

Footnote: The electrical device for ships shown on the foregoing page is sufficient for symbols not exceeding a square. Otherwise a bigger signalling board would be used.

SEMANTOGRAPHY
FOR SPECIAL AND EVERY-DAY PURPOSES
IN CHEMISTRY AND PHYSICS

"Chemical formulae contain at the present day such detailed information, concerning the relationship of the substances symbolized, that one might conceive the possibility of writing a chemical paper with formulae alone...

We perceive here the realisation of the ideal of a purely ideographic language, which can be read by the specialist without his requiring to translate it into the words of any particular form of speech...

These well known facts show that the problem of an international language has already been partly solved by science."

Wilhelm Ostwald (27)

In mathematics, almost all meanings are symbolized, and a mathematical treatise could be written wholly with international symbols readable in any language. There are even mathematical symbols expressing the meaning of because and therefore, consequently which are sometimes used to lead from one equation to the other. I have refrained from adopting these two symbols in semantography, because they are practically unknown and not used, and because they are wholly arbitrary.

Chemistry is the next science in which symbolization has gone the longest way and this is very remarkable, because chemistry deals with hundreds of thousands of different substances of our world, whereas mathematics deals foremost with abstract meanings.

As said on foregoing pages semantography is to be considered as the final consequence of international symbols - a complete language in which anything can be expressed. Therefore in this chapter, we shall see, that any chemical meaning - up till now only expressed in words - can be expressed in symbols.

This may have a manifold effect. First it would serve the chemist. He would be able to write treatises, reports and directions for chemical treatment wholly in international symbols. That this would enable him to correspond also with fellow chemists of other countries and other languages on chemical matters (and also telling of his vacation, and asking about the health of the whole family, etc. etc.) is only a happy by-product.

Furthermore it would help the many millions of boys and girls who have to learn chemistry in school. The critical chemist may point out that it is not necessary to evolve geometrical symbols for many chemical meanings, because most of them are already expressed in international words, composed of Latin and Greek roots. Partially - they would say - we have already an international language in chemistry. Words like Absorption, Atom, Molecule, Concentration, Dialysis, Destillation, Emulsion, Isomorphy, Polymorphy, Isomery and Polymery and hundreds of other expressions are already internationally used by the scientists, the chemists, the doctors, the physicists and the biologists.

This is true, but the fact remains that these words are a nightmare to the millions of students. It would be a simple matter for them to understand the meanings of these words, if they would be Greek boys and girls or if they would know Latin very well. The word isos means in Greek (same) equal and polys means many. Furthermore morpho means form and meros means part. So, Isomorphy means Same-form or Form-equality and Polymorphy means Form-variety. Isomery means Parts-equality (2 chemical containing the same parts) and Polymery means Parts-variety (2 chemicals containing different parts).

It is simple enough and easy to understand - but only for the man, who has studied Latin and Greek and - besides, who handles these terms all his life - in short, a scientist. But, for the boy and girl who cannot speak Latin or Greek, and whose mother tongue is not of Latin origin (like English in part, or Spanish, French, etc.) it's very difficult.

I remember vividly my own boyhood. I was the best student in chemistry and physics. I made a chemical laboratory out of our home, to the despair of my mother. I lived and dreamed with and of all these chemical meanings. But Latin was not taught in our school. These words were meaningless to me, and I had to learn their meaning the hard way. Even today and right now, writing this line, I have to pause and think hard to remember the meaning of Tautomery or Tautomerism. Even if I happen to know the meaning of the Greek word tauto = same I don't get very far. Isomerism and Tautomerism should mean the same.

Yet there is a difference, and you have to know the difference to pass the examination.

This then is the real situation: those Greek-Latin words have no meaning for the millions of boys and girls who go to high school and college; in most cases even if they learn Latin and Greek or its rudiments, ^{words} these are a nightmare and most students learn them the hard way to forget them as soon as examination is over. This is no happy state of affairs. After all, the parents have to work hard, in order to be able to send their children to schools of higher education. It would be a deplorable waste of time, money and effort to all concerned, and in fact - it is for those who don't take up the profession of chemist, doctor, etc.

Well, we may say: if the boy and girl don't need these terms and their meaning in later life, better they forget them right away ^{when} they leave school, instead of ^{carry}ing a "ballast". But this is not the case. Not only do we need chemistry in our daily life, in the house as well as in the kitchen, if we paint a door or prepare a meal - the knowledge of chemistry, to a certain extent, is today considered as necessary for a grown-up man or woman, ^{just} as the knowledge how to handle a spoon or a fork at table. It's actually part of today's table manners.

This does not mean, that it must be part of a "highbrow's" outfit. No, we all are actively and immensely interested in the progress of the sciences and especially chemistry and physics. Not only because of its sinister aspect for war-time use. We all, boys and girls, men and women, farmers and workers like to read popular science articles. Great newspapers have at last established the post of science editor and there is no Sunday supplement which does not contain at least one science article. Almost every copy of Readers Digest contains about 5 science articles, and the same applies to other magazines.

We could even go further and say: the knowledge of chemistry to the citizen of today and to-morrow is most important. The preservation of food, the raising of better crops, the fight against destructive pests and diseases is of ^{paramount} importance for the peace of the world. And there is the health of the individual and of whole nations, depending of an understanding of chemical and physical conditions. In other words:

We must do our utmost to make the learning of chemistry, physics, etc. so easy for the student boy and girl, that they should not forget it after leaving school. This knowledge should remain with them and help them to a better life and a better society.

Looking over these lines, I find that they express an awful platitude. If there is one branch of science in which the teachers have done their utmost to make its learning interesting and fascinating it is chemistry and physics.

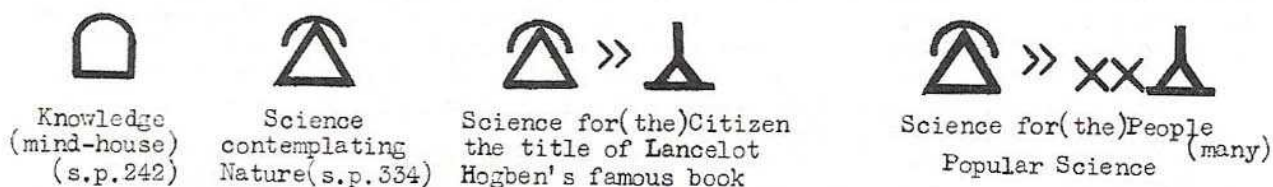
Yet, we can continue and progress on this road: making learning easier, making knowledge to remain and be put to best use in our later life.

I remember a ^{comic} incident from my university days. My first examination was in mineralogy. Now, every ^{student} knows that - although those beautiful crystals are most fascinating miracles, wonderful to behold - the knowledge of the detailed properties of minerals is an awful memory job. You have to hammer it into your head and sure enough you will soon mix up, the shape and system, the colour and the structure, the formula and physical and chemical peculiarities of the many minerals on the list. I tried mnemonics and, when I found that even this was not sufficient, I sat down, exploring - besides my mineral vein - also my poetical vein, and composed a little verse of 4 lines for each mineral. These verses contained in easy flowing, even humorous words all you have to know about a particular mineral. Learning these verses by heart was easy enough and armed with them I went with flying colour through the examination I had even the freshness to ask the professor about the marks I have got. Finding that it was the usual best mark, I asked him to task me even further, because I wanted exceptional honours - and I got them.

After that, I followed the plea of some friends and had these verses duplicated and sold by the students economical committee. They became a best seller, and I was proud of hearing years afterwards that copies in shreds still make the round with the students who studied for examination. I still treasure one copy, and I still remember many verses.

All my life, I have been filled with the joy and the wish to explain things. For 25 years I have been a honorary lecturer in educational halls, and so-called "peoples universities". I liked to go there, after a days work in the factory and talk to those people, they themselves heavy with tiredness after a hard days work - but eager to know, eager to understand, eager to learn.

Popular Science - this term has fallen into disrepute, but only with those men who can't get away from the Latin words, especially the long ones, and find themselves unable to use simple language. What is the meaning of Popular Science and how would this term be written in semantography?



Written this way: Science for the Citizen, and Science for the People, these words look sensible enough and they show what is meant. In a later chapter, we shall see that the confusion of mind is largely due to our disastrous habit of making and using adjectives. An adjective is an abstraction, a human VALUATION. The people, that we know. But what is "popular"? Everyone gives it a different interpretation.

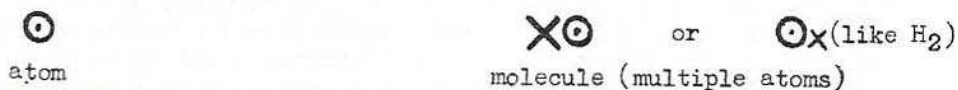
In this chapter I hope to be able to show, that semantographic symbols for the chemical and physical terms would not only be helpful for international reports and correspondence - they would also help the students to get the meanings easier and to hold them longer in their memory.

To the men of learning who are reading this chapter I ask for their utmost benevolence. To demand to reject is easy. This here is only a proposition, which can be altered and improved, until it proves workable. After all, the chemical formulae which we use today, are only a thing of "yesterday". They too were once a proposition open to criticism and improvement. And what wonderful help these symbols have been and will be!

After this long introduction let us plunge right into the whirlpool, where it is most dangerous and most difficult to navigate. The symbolization of common terms, like Absorption or Concentration, of Osmosis, and Dialysis may be simple - but how about the new atom theory? Starting with this, might make interesting reading for the learned man and even for the not learned reader, who meets these words every day in the papers. However, these readers would have to excuse for a certain brevity. It is impossible to explain all the following terms in this chapter. It would make a whole book. The aim is to convince the learned reader that all terms can be symbolized.

Two other points must be born in mind. The first is, that the present terms may be obsolete to-morrow. Then we would discard the symbol as we would discard the word. We did this many times in the past (phlogiston, etc.) Secondly, we shall not take into account the wave theory, which discourages the formation of geometrical models (see p.212 ff). We shall build up our symbols on the basis of the Rutherford atom model.

All the symbols in this book are grossly exaggerated in size and thickness of lines. In actual practice they should be written and printed much smaller. This we will do in many cases in this chapter.



These are vivid symbols. They show that an atom consists at least of two things: an inner nucleus, indicated by the centre dot and an outer ring, circumscribed by the circling electron. The nucleus is also called proton. The symbol outlines the simplest atom, the Hydrogen atom, according to Rutherford.

On the other hand, the same symbol could be equally used for the wave theory, for instance for the Schroedinger atom model. The centre dot would indicate the concentrated electric density in the middle; the outer ring would indicate the outer limits of the atom. Under a powerful magnifying glass we would see that the drawn circle is just as fuzzy and indistinct, as the outer limits of the atomic "wave packet" is supposed to be. For some "explanation" see p.207 ff.

At present, small letters are used to indicate those tiny bricks. However, the same small letter is used sometimes in another branch to indicate something entirely different. Furthermore, the letter itself gives ^{no} indication what it should mean. The following symbols are insofar better, as they give this indication and thus help a student or a newspaper reader to understand what the letter or the word mean. The following symbols could be printed in newspapers just after the word proton or electron in the same way as it is done to-day: Carbondioxide(CO₂).

Following the Rutherford model, in which proton, electron and neutron consist of tiny corpuscles with various electrical charge, we shall depict these tiny corpuscles by tiny dots. However, the heavy one, the proton should be depicted low on the line, indicating its heavier body against the much lighter electron, to be put higher up.

	. +	. -	. . +
	proton	electron	neutron
Explanation:	a <u>heavy</u> (drawn low) <u>particle</u> with <u>positive</u> electric charge.	a <u>light</u> (drawn higher) <u>particle</u> with <u>negative</u> electric charge.	<u>two particles</u> , one <u>light</u> (electron), the other <u>heavy</u> (proton, drawn low) with no electric charge (both being neutralized).
Weight: (relative) heavier than 1 electron	abt. 1840 times	1	1 + 1840 = 1841
			1 + 1840 + 1840 = 3681

I have mentioned the weight to show that the proposed symbols are not only instructive in so far that they show the number of particles, the light and heavy ones, the electric charge, and to what particle it is attached - but these symbols enable us immediately to calculate the whole relative weight. We do this, just as children do by adding beads on a wire. We don't need to remember the exact figure of 1840. If we remember only 1800, or what is even simpler 2000, we get a fair picture of the atom model.

I maintain that these symbols, if taught in school, would not only reduce memory work but would also give the pupils a better insight in the characteristics of the atom. Even newspaper readers would profit, if the paper would print the symbols after the words proton, etc.

The above symbols are capable of additional work. In 1932 C.D. Anderson discovered the positron. We shall draw its symbol from the above symbols:

. +	. -	. +
proton	electron	positron

Looking at the symbol for the positron you can guess its characteristics:

a light particle (as light as that of the electron) but with positive charge

There are indications that some scientists believe that the proton can be split in particles of half positive charge. Well, the symbol $\frac{1}{2}$ will serve then.

A new word appeared mesotron, and newer words will appear - and if necessary, we will happily scrap all the above symbols and draw up better ones. Scientists have always done this and will continue to do so, as long as mankind exists on this planet.

Let us now write a few words which always reoccur in newspaper articles and school books and let us put our new symbols in brackets.

Hydrogen nucleus (. +),	Helium nucleus (2. +, 2. .)	α - rays (2. +, 2. .)	β - rays (. -)
a <u>proton</u>	same	same	same
(heavy positive particle)	2 protons and 2 neutrons	the symbols say even more:	an <u>electron</u>
	4 protons and 2 electrons (the latter bound up w. 2 protons)		(light negative particle)

Everyone who had tried to study books and articles on atomic energy and the like, will agree that the constant change of terms, an electron or a particle (these are simple compared with the more complicated terms), gives a constant headache, and such additional symbols may help the reader and especially the student, who has to know or else....

Before we advance to the usual element symbols and to their simplification, we may write down - just for exercise, a few other terms with our new symbols.

⊙ . - . +
Hydrogen atom

⊙ 2. - 2. + 2. .
Helium atom

⊙ 92. - 92. + 143. .
Uranium 235 atom

PROPOSAL FOR A REVISION OF CHEMICAL SYMBOLIZATION

After a little practice any boy or girl should be able to read off the exact number of electrons($\cdot -$), protons($\cdot +$) and neutrons($\cdot \cdot$) in any atom. Moreover, the symbol for the neutron ($\cdot \cdot$) shows clearly, that a neutron is actually a packet of one electron and one proton. This symbol enables the student to count off the total numbers of protons and electrons by adding the "lower dots" for the heavy protons, and the "upper dots" for the light electrons. Actually, we don't need the symbols for the electrical charge

Uranium 235 atom = $\odot 92 \cdot 92 \cdot 143 \cdot$

Now, numbers are growing a bit thick, and there are even more of them, so we better take stock of all numbers which surround the symbol for the element. This ¹⁸/a capital letter.

number of molecules in a chemical equation = 5
 atomic number (number of electrons or protons) = 5
 Element **E** 5 = mass number (protons plus neutrons)
 5 = number of atoms in a molecule

As you see, it is very difficult to write these numbers in their proper place with an ordinary typewriter. Even the old established numeration H_2SO_4 or K_2CO_3 is a bit difficult, as you have to shift the cylinder just a tiny bit upwards. Sometimes you succeed, sometimes the number comes out too low, sometimes on the same line as the capital letter. It is all good for handwriting, but not for typewriting. Even with some of the modern machines which have half spacing, it does not work properly, because the number touches the line below. When I had much typewriting work on chemical matter, I simply ignored the necessity to lower the number and wrote on: H_2SO_4 or K_2CO_3 . After a while you don't notice the difference. I believe, that that type of notation would not have agreed upon, if, at the date of its acceptance, the typewriter would have been invented and much in use with chemists.

It would be different with the semantography typewriter, because each writing line, consists of top and ground line, and comprises altogether 3 spacings.



In practice the symbol would be smaller and the three spacings would come closer together. On the other hand, the cheapest semantography typewriter would not carry the capital letters (although I hope that a typewriter with lines, small and capital letters will be brought out, if semantography is accepted). But the absence of the capital letters should not deter us. If necessary we could easily compose these letter with our lines.

But here we may pause and contemplate the idea, if it wouldn't be better to alter the existing lettering system for the elements, at least for atomic nuclear calculations. With the many isotopes and isobars, the lettering makes it quite difficult in various cases. With ordinary chemical equations as we need them in practical work, we may retain the old established system which served so wonderful in the past.

Where are the weak points in the old lettering system? One is the fact that the element, symbolized by its initial letter (and sometimes an additional letter) has quite a different name in different countries. I worked for 16 years in a factory for electric lamps and I could never overcome the irritation that Tungsten is symbolized by a W, indicating Wolfram and vice versa. Iron must be symbolized by Fe, which indicates the Latin name Ferrum. It's not only a matter for the scientist, who is well acquainted with the Latin names. Today, innumerable girls and men, not trained in chemistry, work in industrial chemical laboratories and plants. Mistakes do occur, sometimes with disastrous results. Sometimes the symbol tallies with the name as in C for Carbon, S for Sulphur, but sometimes not. Moreover, hundreds of chemicals are on the market for the kitchen and the workshop, which contain Sodium or Potassium, and sometimes the correct chemical name Natrium and Kalium are given, only to cause bewilderment. Sodium is symbolized by Na, and Potassium by K.

These differences occur not only in English. They are found in other languages. In German, Oxygen symbolized by O is called Sauerstoff; Hydrogen H is called Wasserstoff, etc. In Russian, Chinese, and Arabic languages, the alphabetical letters have no meaning in regard to the written name of the elements.

Perhaps the time has arrived where we may contemplate a new system, based on the ato-

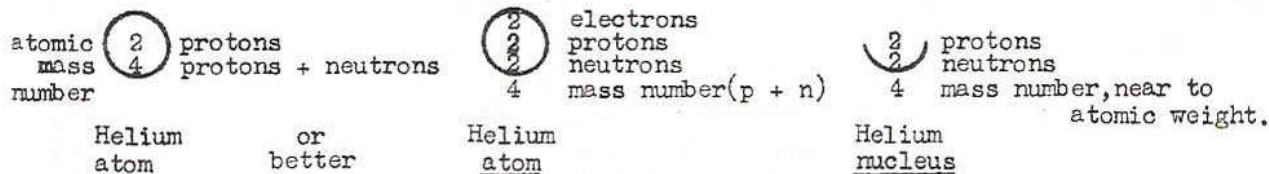
NEW SYMBOLS FOR INTERATOMIC REACTIONS

mic numbers. This would be of value for inter-linguistic communication, especially between countries, where the elements have different names. These symbols could thus be used on technical reports, blueprints, as well as on signs on merchandise, cases, bottles, etc.

$\textcircled{1}$ = Hydrogen	$\textcircled{13}$ = Aluminium	$\textcircled{88}$ = Radium	Note: the symbols for the seasons (p. 109) would have to be slightly altered, as shown on page 416.
$\textcircled{2}$ = Helium	$\textcircled{26}$ = Iron	$\textcircled{92}$ = Uranium	
$\textcircled{7}$ = Nitrogen	$\textcircled{29}$ = Tin	$\textcircled{93}$ = Neptunium	
$\textcircled{8}$ = Oxygen	$\textcircled{80}$ = Mercury	$\textcircled{94}$ = Plutonium	

If you think that these numbers would be difficult to remember, just think how many telephone numbers you know by heart; and to remember FX 3684 or Barclay 4-7938 is much more difficult than to keep in mind that 26 means Iron and 80 means Mercury. For the ordinary worker and technician, who is not a chemist, there are only a few numbers with which he has to deal 6 = Carbon, 29 = Copper, 82 = Lead, 25 = Manganese, 30 = Zinc and a few more. These numbers are easily remembered.

They are a boon for the chemistry student, because they give him immediately the number of protons in the nucleus and the number of circling electrons. In view of the fact, that atomic structure is taught today in higher schools, we could write some more numbers into the circle, to make them more instructive for the student.

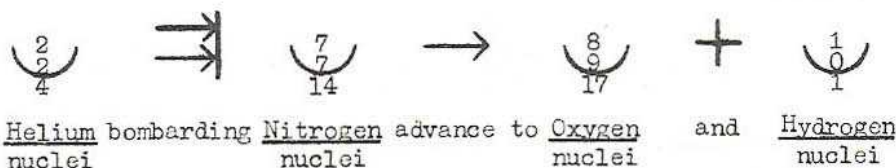


Such a presentation may be used only for educational purposes. This would make it easier for the boys and girls to grasp the difficult theory.

The number for the electrons stands on the upper rim, indicating the light electrons, which surround the nucleus. The number for the nucleus protons stands where it ought to stand, in the centre, the nucleus. The number for the neutrons stands below, indicating that they are the heaviest, consisting of a proton and a electron. The number beneath the circle is the simple sum total of protons and neutrons. This is the mass number (mass-heavy-down below) and is the approximate number for the atomic weight. The upper part of the circle removed, and also the number for the electrons (see 3rd picture above) indicates clearly, that there are no electrons present, only the nucleus, comprising of protons and neutrons. The nucleus, a kind of shell, is indicated by the half circle.

To see that such a presentation would work, we may now write down the famous historical first splitting of the atom.

Rutherford's first splitting of the atom (1919)

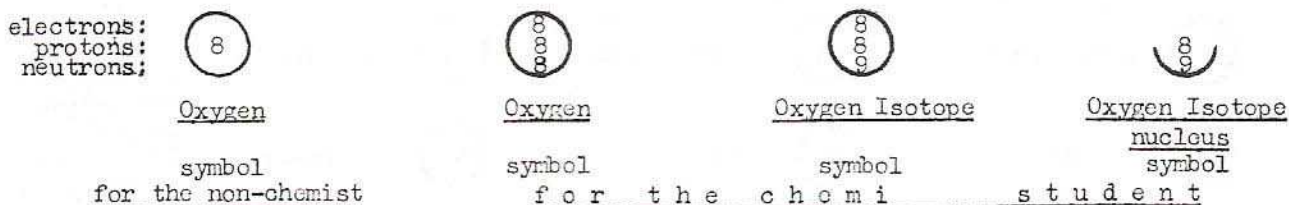


Written in this form, the whole equation becomes a simple adding up of three rows of figures, with the possibility to check the results by comparing the equations.

<u>1st row:</u> 2 + 7 = 8 + 1	<u>2nd row:</u> 2 + 7 = 9 + 0	<u>3rd row:</u> 4 + 14 = 17 + 1
<u>proton equation</u>	<u>neutron equation</u>	<u>mass number equation</u>

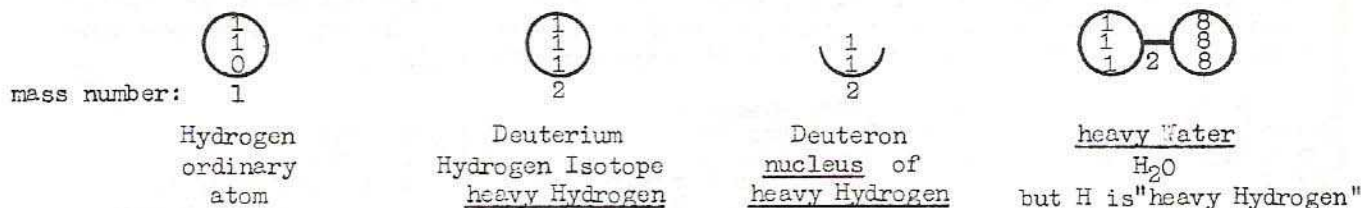
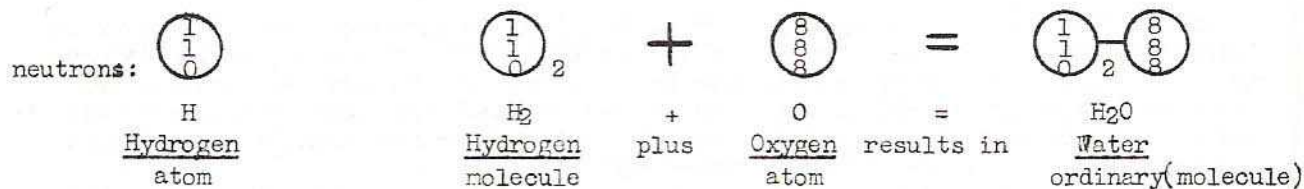
SYMBOLIZATION OF PROTONS, ELECTRONS AND NEUTRONS

But this presentation has even further educational value, It enables the student to learn the meaning of the isotopes in the simplest way. He knows the symbol for Oxygen



Now a student can see at a glance what the meaning of Isotope indicates: Atoms having the same amount of electrons, the same amount of protons but different amounts of neutrons are called Isotopes; and this applies also to isotope nuclei.

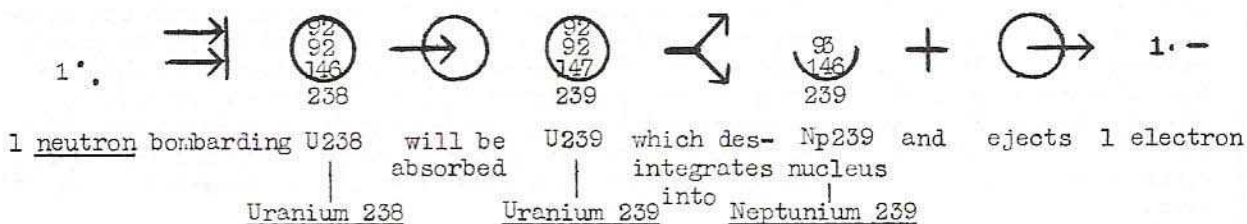
Now we can write down in simple symbols, that "thing" which has bothered newspaper readers for many years: that "heavy water".



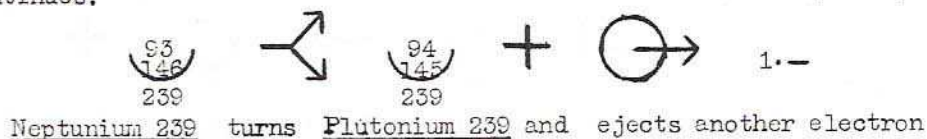
Now you can see it at a glance: the heavy hydrogen atom is about twice in weight (mass number 2 instead of 1) and consequently a molecule of heavy water contains 2 neutrons more and is therefore slightly heavier than ordinary water.

One last example to prove the educational value of this system of symbols.

Atomic Fission in Uranium



A student can easily see that 1 neutron is absorbed: from 146 to 147. Then the atom breaks up, and the newly absorbed neutron (which consists of 1 proton and 1 electron) breaks up too, adding one proton to the nucleus making it now 93, a new element Neptunium and the remaining 1 electron is ejected. The 92 electrons of Uranium are scattered too. (not depicted)
Now the reaction continues.



The student can now see in the drawing that one neutron breaks up, leaving only 145 neutrons; its proton remains in the nucleus, adding it to 94, making it thus a new element Plutonium; the electron (of the broken-up neutron) is ejected.

This is a proposal of symbolization for educational purposes only. Research in this field is going on rapidly, making the symbols of yesterday obsolete today. But semantography may nevertheless be of help for reports and correspondence between scientists.

Before I am going to prove that practically every term, law and happening in chemistry and physics can be symbolized, I wish to say, that it fills my chemists heart with pride, that the chemists are the scientists, who have symbolized their language to the furthest extent, in any case more than any other science. Mathematics must ^{be} an exception, because it deals ^{mostly} with abstract notions, whereas chemistry deals with the things of our world. This fact has been recognized by the linguists.

Stanley Rundle (15) wrote:

"In mathematics too, ... the system of numerals overrides all the linguistic barriers of Europe. It is like the 'ideographs' of written Chinese, which have the same meaning all over the Chinese empire, in spite of the fact that they are called quite different names, in different districts. We know immediately what 5 means, whether we call it five, cinq, fuenf, pyat, or

A similar system has been devised in the case of chemical formulae; HCl always means the same thing to a chemist, whether he calls it hydrochloric acid, acide hydrochlorique, or Chlorwasserstoff."

Frederick Bodmer and Lancelot Hogben ⁽⁵⁾ wrote:















"Revision of chemical terminology created an international vocabulary of Latin and Greek roots, ... realised Wilkin's dream of a real character. Modern chemistry has a vocabulary of ideographic and pictographic symbols for about a quarter of a million pure substances now known."

Critics may point to the international vocabulary of chemistry and may deny the necessity of devising symbols for these notions. Against this I wish to point out, that (1) these words have only a meaningful content for those persons who know Latin and Greek. For the student, devoid of this knowledge they are meaningless, whereas the new proposed symbols show in outlines what is meant. They should be used, even if only for educational purposes.

(2) Although the international word is built up similarly in different languages, there are differences in the endings, inflections, etc. in conformity with the different languages. Osmosis is termed in German Osmose, Osmotic is termed in German osmotisch, and in French osmotique. Then we have chloric in English, chlorig in German chlorique in French. But the endings are very important in chemical terminology, because different chemicals have different endings, -ite, -id, -ate, and others. A foreign chemist handling an international term may never be sure whether a different ending, indicates a different meaning or not. Geometrical symbols may therefore serve some purpose, even with scientists.

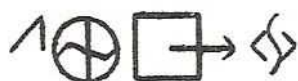
The following symbols are only proposals for a complete symbol list of all chemical terms. They may be improved, altered or discarded in compliance with the progress of our knowledge. Their acceptance should depend on the decision of an international body of scientists.

The old-fashioned retort is so unwieldly and difficult to clean, that it has practically vanished from the modern laboratory. It is now a symbol only, depicted on the buildings of chemistry institutes, diplomas or the lapels of soldier uniforms, indicating division of chemical warfare. We shall use the retort outline for our symbol for chemical and chemistry.

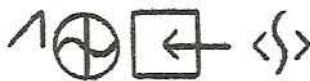
			or			
bottle (read p. 286)	retort outline	chemical chemistry		shorthand symbol	change (s.p. 279)	chemical change
						
development	chemical reaction	reversible reaction	equilibrium (equal=) in rev. react.			
						
product THING changed	agent changer	quick much movement	catalyst agent f. quick chem. reaction			

We could, of course, invent a different symbol pointing out in another and better way the special property of a catalyst, or we could agree on an even simpler symbol to stand for the meaning of catalyst and catalysis.

We can easily depict chemical reactions which absorb or produce heat.



exothermic reaction
heat out



endothermic reaction
heat in



exchanged product
(s.p. 233)



substitute
chemical

Having thus developed a few chemical terms we may now devote a few lines to common terms in applied chemistry and industry.



trade, business
(money in hold)



chemical trade
in general



to make, produce
(s.p. 334)



manufacturing trade
industry in general



chemical industry



chemical process
(these are shorthand symbols)



a chemical



pure chemical
self symbol (p. 273)

With reference to our symbols for creation, nature and man-made on p. 334 we can write



science
(contempl. nature)



plan, design
(contempl. to make)



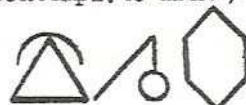
scientific
chemistry



applied, practical
chemistry



organic chemistry
Carbon (atomic nr. 6)




benzene chemistry
(benzene hexagon)



test, experiment
(act. before quest.)
(s.p. 273)



chem. experiment
(outcome questionable)
shorthand symb.)

Now a few important symbols for ever occurring terms. The basis is the little square  indicating a chemical THING. The evolved symbols are a bit arbitrary, but somehow indicate the real thing. The repetition of the THING symbol looks like a perspective drawing of a cube, indicating a solid THING. A metal is a solid thing, usually made in bars (elongated)



THING



solid THING



metal



water



liquid other th. water
(outline $1\frac{1}{2}$ wave)



solution



gas



crystal



to crystallize

Putting the ACTION indicator on top of the symbols gives us, besides to crystallize, also to solidify, to metallize, to liquify, to dissolve, etc. The upgoing arrow in the symbol for gas should not mean that gases always go up. There are gases which are heavier than air. But the symbol is an indication that gas molecules wander upwards, in contrast with solids and liquids which usually tend to go downwards.

For ordinary every-day purposes we can evolve a simple symbol for material, indicating raw material, which we get from the earth. Putting this symbol before any other symbol indicates the raw material of the other symbolized thing.



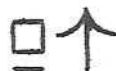
THING



earth



raw material



wood (tree)

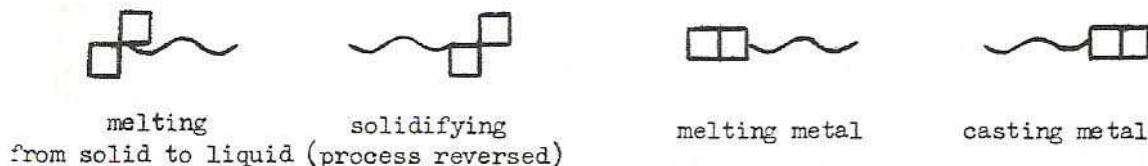


steel (knife)

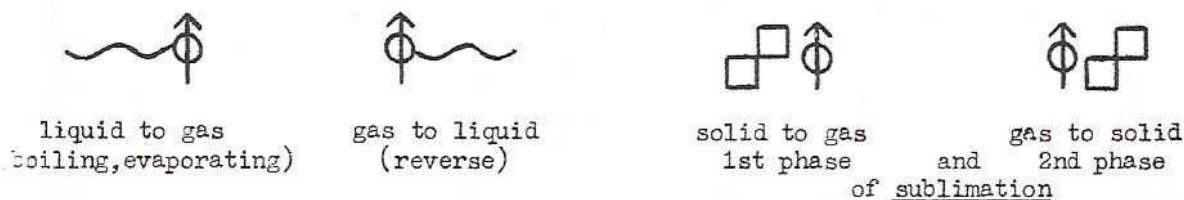
Here are a few examples of symbols for the description of crystals and materials.



And here are a few symbols showing the change-over from one aggregate state into the other.



On the foregoing page we have seen that we can express the meaning of to solidify, to liquify, to crystallize simply by putting the ACTION indicator ^ on top of the symbol, which then indicates to make or become solid, etc. Nevertheless, the above symbols are vivid and in line with the following ones.

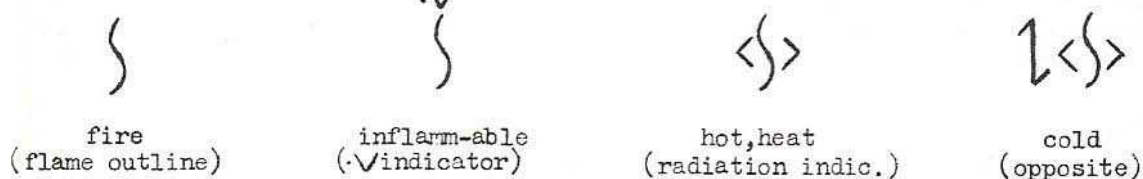


These symbols have a deeper meaning. To indicate the process, the ACTION, we would still put the ACTION indicator ^ on top. As they stand, they indicate the THINGS and we know that in melting, freezing, boiling, evaporating, liquifying and sublimating both aggregate states are always present, and this is clearly indicated in the symbols above.

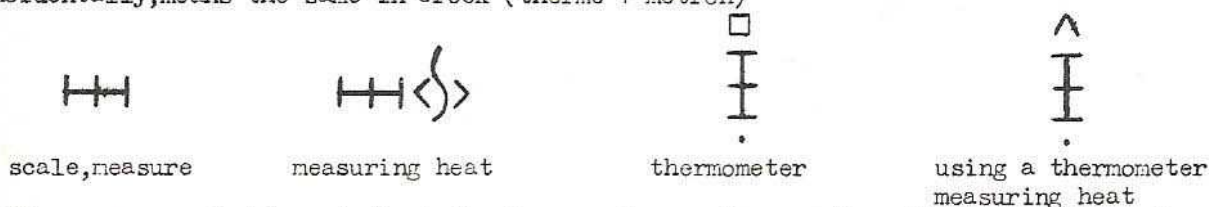
For ordinary purposes and also for chemical purposes, when we handle water, we can resort to the simpler symbols, already shown in previous chapters.



And now a few terms of Physics, such as we use every day.



Hot and cold are vague in meaning, for the chemist, almost meaningless. He measures. Instead of combining the symbols measuring heat, we can outline a thermometer, which word, not incidentally, means the same in Greek (therme + metron)



Of course, we don't need the indicators on top, as the meaning will become clear from the context.

MORE SYMBOLS FOR CHEMO-PHYSICAL MEANINGS

Scientists measure in Kelvin degrees, starting with the absolute zero, which is - 273 C°. K° means Kelvin degrees, C° means Celsius degrees in honour of Kelvin and Celsius. Fahrenheit did a good scientific job in his time, but - in view of the fact, that Celsius degrees are used by science and in many countries, it is high time for a world unification.

The colon (:) is used as a relation symbol, and also to indicate the coming of a pronouncement. It found the same use also in semantography:

temperature: (the figure to follow)	temperature in Celsius degrees	<u>rising</u> temperature <u>raising</u> (> active indic.)	falling temperature

boiling point of water	boiling point (any chemical)	melting point of metal	kindling point

To end this section on temperature and heat, here are a few other symbols.

liquid, inflammable,	gas, inflammable	oxidation addition of element nr.8	oxide (the product of o.)

The last symbol should not mean, that I propose to use this symbol for oxide, instead of that used in chemical formulae. On the contrary, I want to demonstrate, that - if the ACTION indicator on top indicates the ACTION of adding oxygen; than the THING indicator on top, indicates clearly the product, an oxide, a THING.

And now, a series of symbols for a most elusive subject, which has no outline: a solution.

an opening also an open enclosure	a pot with 2 handles	a pot, vessel with water	a pot, vessel with any liquid

The great majority ^{of liquids} which are handled in the laboratory, the factory and the kitchen are solutions of THINGS in water. We shall therefore use the water symbol in most of the examples shown below, even in those where we clearly indicate the nature of the liquid.

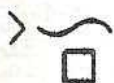
	or simply			
solution		solution	soluble	solubility (s.p.246)

We can now clearly indicate the nature of any solution, by adding the formula, etc.

		1 l	1 l
			58.5 g
solution of: <u>salt</u> in <u>water</u>	<u>iodine</u> in <u>alcohol</u>	<u>polar solution</u> (general: gram molecule in 1 liter water)	<u>polar solution</u> of <u>salt</u>

Every chemist knows that the words: a 10% solution are very ambiguous. These symbols can clearly point out the 10% (weight or volume) of what in what (weight or volume)

In a similar way we can point out any special solution. Here are a few simple terms.



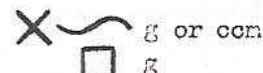
the solvent
(the liquid indic.
by pointer >)



the solute
(pointer on dis-
solved matter)

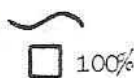


concentration
much solute



dilution
much solvent
(Exact amount in g & ccm is
to be preferred)

Now, we know that the small multiplication mark X indicates much or many in a vague meaning. To be accurate, we just have to put the figures of how many grams or ccm of the solvent and solute is involved. Without these figures, the symbols can be used for ordinary speech, as for instance: "What is the concentration?" which question equals the other question "What is the dilution?"



saturation



precipitation



solution plus
sediment



solution plus
crystal sediment

As said before, these are only a few examples as proposals, which may be amended or made more elaborate. For instance, we must never lose sight of the fact, that the small square indicates a chemical THING, be it solid, liquid or gaseous. Often, however, we use it to indicate something, which is usually solid (but which can be melted or evaporated). The symbols above are therefore a little arbitrary, but, once understood, would present no difficulty. Don't forget that the dissolved matter is invisible and cannot be depicted.

We can advance to more elaborate presentations of chemical and physical terms.



diaphragm



filtration
(in industry)

or



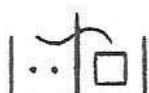
funnel



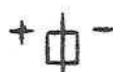
filtration
(laboratory)



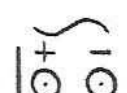
osmosis
(water-solution)



dialysis
(colloid-solution)



or



ionisation
(splitting in positive and negative charges)



atom



molecule



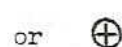
ion
electrically charged
atom



ion
charged
molecule



ion (pos)
cation



ion
anion



ion (neg)
anion



ion
anion

Until the theory of ions and the theory of protons, etc. are unified, these symbols will serve as practical signs, just as the terms serve. Later on, we may abandon terms and symbols.



forward
move



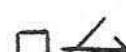
electricity



conducting
electricity



insulation
stopping elec.



conductor



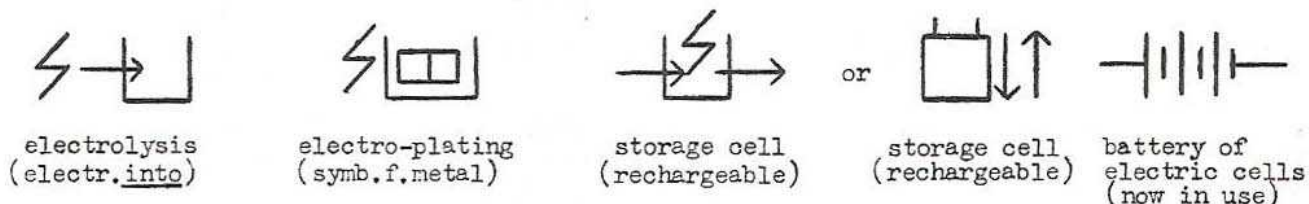
electrolyte

We could, of course, draw the symbols differently, employing the electron symbol, etc., but

the final decision on all the symbols should be left to be worked out by a commission. However, we should be allowed to express a term in more than one symbol, if both symbols are consistent with our general rules in semantography. For instance the meaning of straight should be expressed by a straight line. However, the opposite sign plus the curved line gives us the same meaning. Consequently, if two or more symbols have been shown in this and other chapters, they may be used simultaneously. For instance, the ⚡ lightning symbol should be used in simple "colloquial" speaking or writing, but we can express the same meaning in a non-colloquial more-to-the-point symbol. Herebelow are a few examples.



For "colloquial" writings, for instance, in the workshops of electricians, we could use simpler symbols, as shown below.

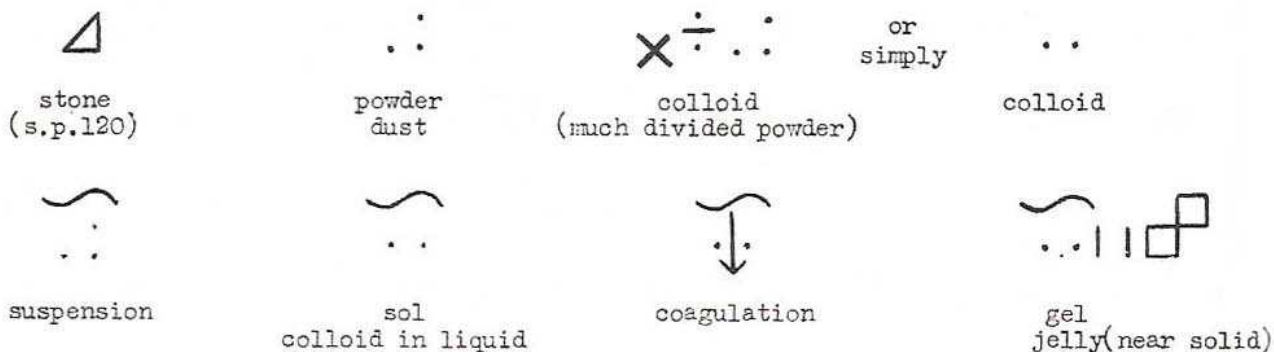


The first symbol is self-explanatory. The second is arbitrary, showing the symbol for metal, without indicating what happens. The third symbol is again self-explanatory. The fourth is objectionable. It may mean even an elevator (with the arrows). Without the arrows it is used already to indicate a cell, or a battery, just as the fifth symbol is already in use, but mostly to indicate a non-rechargeable series of cells.

The next symbols show proposals for the symbolization of acids and bases.



With these examples we shall now close the list of chemical symbols in connection with electrical charges and shall proceed to other branches, for instance colloid-chemistry.



If the use of three dots or two dots seem a bit arbitrary, it may be considered, that the terms suspension and colloid are also arbitrary as to their difference. There is no sharp difference. A colloid may even be termed a mixture, if we disregard electrical charges.



Similarly, we can symbolize mixtures and solutions of gases in liquids, and also all terms relating to alloys. We can even use the symbol of a graph to point out special meanings.

a graph graphical demon- stration of relations	graph about atomic numbers	pointers indica- ting x & y axis	eutectic alloy >y-axis:melting temperature(metal) <x-axis: percentage of mixture pointer to lowest melting point.

But, we could also write in our symbols:

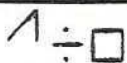
mixture of metals, (having) lowest temperature of melting.

but the graphical demonstration of a graph in semantography may be sometimes of value. Now a few other symbols.

metallurgy science of metals	corrosion of metals (cross out)	mine (inside mountain)	mining (out of mountain)
	or		
ore chemical stone	ore	metal ore	high-grade
crystallography science on crystals	classification of cr. (division by mind)	axis of crystal	classification of cr. according to axis
	or		or
tesseral system (3 vertical equal axes)	tesseral (cube)	tesseral (axes perspect.)	rhombic (axis perspect.)
oil (usually lighter th. water)	oil (heavier th. water)	oil, edible (food=mouth&earth)	fat (edible) oil, near solid, edible
colour (eye & earth, s.p.154)	paint, dye (colour chemical)	liquid paint, dye (here water ^o indio.)	bleaching (crossing out colour)

These examples should suffice to prove that it is possible to symbolize any term in chemistry and physico-chemistry. A special committee should work out all symbols.

(332)



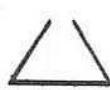
For written reports on a chemical analysis (chem. division of matter) or a synthesis (chemical composition, addition of matter) we can even form symbols for our tools.



test-tube

measuring
glass

tripod

Erlenmeyer
glass-flask

cock



burette

We can type all these tools with our serantography typewriter. But now it is high time that we go over to terms of Physics. We have treated some of them already in the foregoing pages, but now we shall evolve our symbol for Physics, derived from the notion of mass. Again we must try hard to evolve a symbol which is simple. We should not go too much into theory. Yesterday, mass and energy were clearly defined notions. Today we think that mass is a manifestation of energy. A simple symbol would be the symbol for THING "attracted" by a greater THING, our earth. Our symbol for Physics should indicate measuring the happenings in our world, depicting a simple, but most mysterious happening: a fall.



mass



fall



measr.

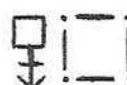
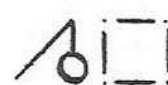


physics

measuring THINGS
performing ACTIONS



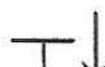
or

structure
(in general)physical
structurechemical
structure

The symbol for structure is an auxiliary geometrical symbol combination, which can be used for any meaning involving structure: atomic structure, crystal structure, as well as the structure of a house and the structure of a society. Geometry and mathematics is involved in all and any structure. We could write in combination: physico-chemical struct. Mass and weight are usually mixed up in regard of their meaning. Again a simple symbol should help us: the outline of scales, a balance; further simplified.

scales
balanceweight
(simplified)

equal weight

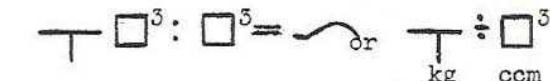
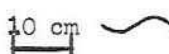
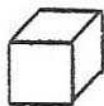
heavy
(for "colloquial" use only)

light

To indicate volume we can use an already recognized symbol \square^3 . But we are also free to use the international symbols cm^3 or ccm or we may even draw a cube and indicate its length.

specific
weight
(weight of
1 ccm)

1 liter = 1 cube (length 10 cm)
of water
(elaborate explanatory symbol)



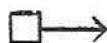
density = weight of a
volume compared w. water weight/volume
(elaborate explanatory symbol)

Remembering my school days, and my struggle with these notions, and the difficulties my class mates encountered, I believe that such symbols and symbol sentences are of beneficial value. They may truly be termed visual education symbols.

To avoid an overlong chapter we shall now hurry through other examples of physical terms. If we realize that chemical meanings are more difficult to depict, than physical ones (which invariably are bound up with some instrument or arrangements) we should be satisfied that physical terms would not prove difficult to symbolize.

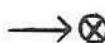
force
(scientific)

or

force
(colloquial)

pressure

or



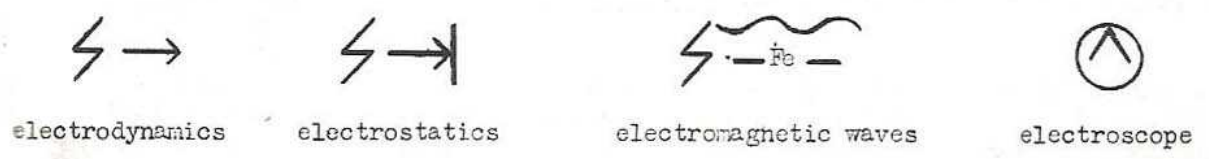
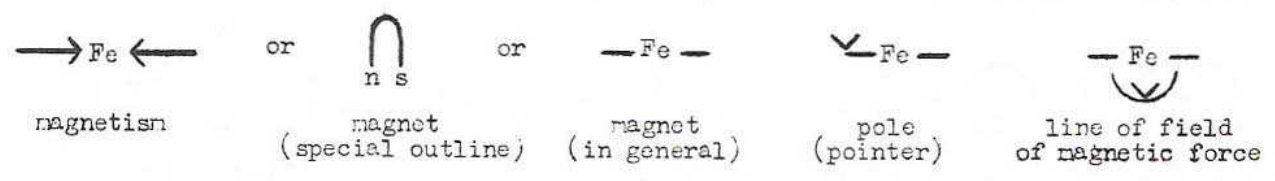
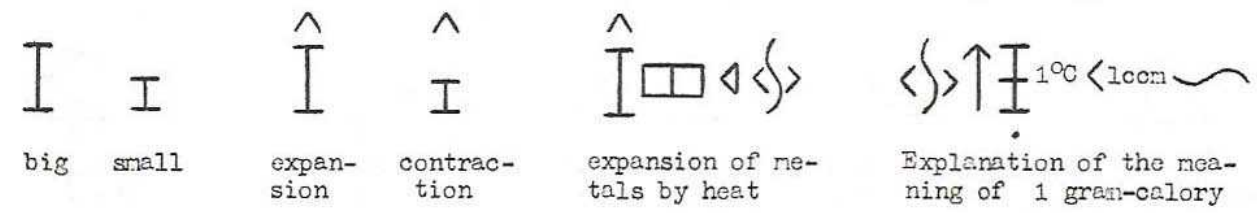
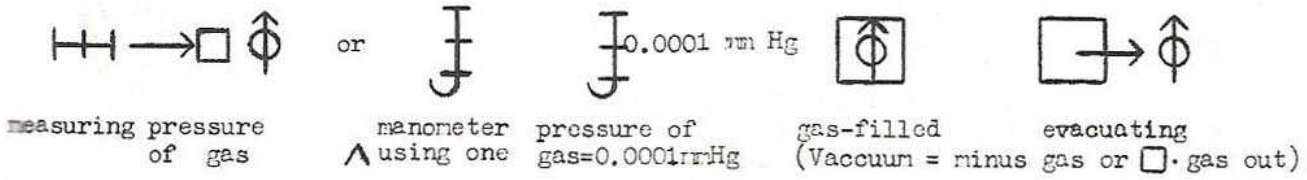
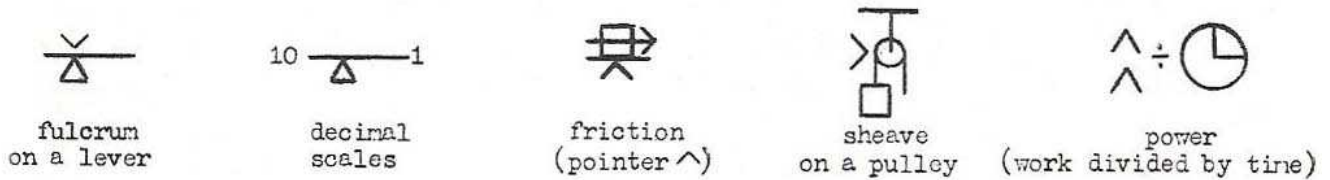
push



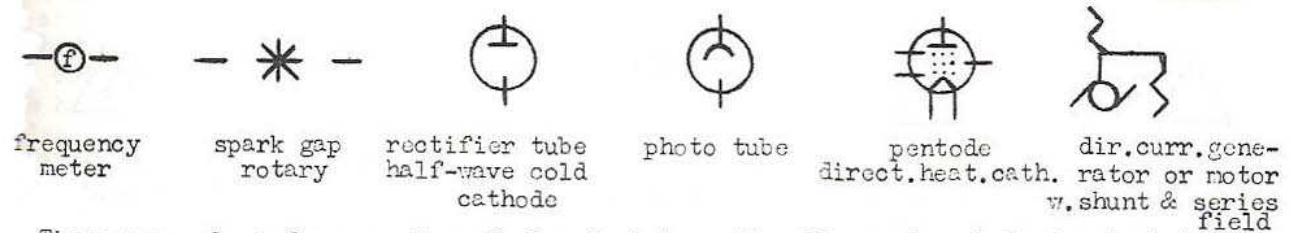
pull

(when movement results; colloq. terms)

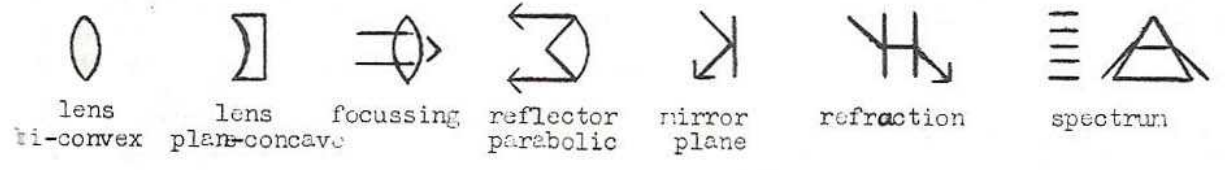
On mechanical arrangements, the pointer \rangle could be used to indicate in a pulley, the sheave, the rope, the load, the fixed point, etc. Similarly, although a little arbitrary, we may indicate on a lever, the fulcrum, the unequal arms, etc.



Here we have arrived on very familiar ground, because in no branch of physics are symbols so much developed as in the branch of electric and electronic research and industry.



These are only a few examples of already internationally used symbols in electricity and radio, taken from Webster's Dictionary (28). A little international co-operation is needed to extend the symbolization into all branches.



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In using our little pointer on the foregoing symbols we can point out the mirror itself, the ray, the angle of reflection, the prism, the spectral lines etc. In using the big ACTION symbol we can point out the principle of Reflection, Mirroring, Refraction, etc. In using the big EVALUATION indicator we can symbolize the buoyancy (from the adjective buoyant), and any other adjectival noun, like capillarity, vacuum, etc. etc.

Here however we may come into conflict with semantography. The big EVALUATION indicator indicates a human EVALUATION, vague in meaning, whereas in the "exact" sciences.....?

Well, the misgivings can be quickly dispelled. Just think that the notion of vacuum is only a meaning in our head. We shall, in all probability, never be able to produce a real vacuum. And the notion of capillarity is again a term for something, which has been "explained" only by introducing other "unexplained" terms, like "attraction", "intermolecular" "forces".

We comprehend the universe and its happening with our senses, even when we measure, and we can reconcile our symbols, which stand for meanings in our mind, a human mind.



EVALUATION
property, quality



rational EVALUATION
(Ego, mind, reason symb.)
outline of head



measurable
(scale, p.244)



measured rational
property, quality



property
quality in
science

As we all know from our changing experiences, the so-called "Laws of Nature" are meanings in our heads. We contemplate nature and apply the relation of cause and effect. During the centuries we had to abandon many "Laws of Nature" or alter them - in our heads.



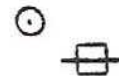
science
contempl. nature,
creation



relation between
effect and cause
(imprint and wedge)



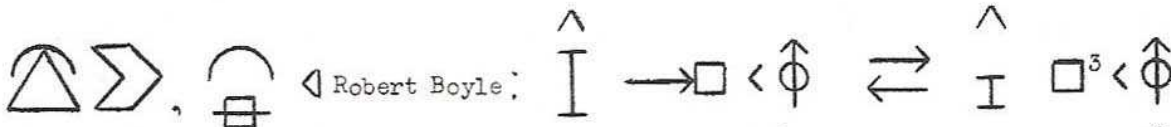
"law of nature"
contempl. cause and
effect in nature



a find
(eye sees THING
on earth)



mental find
discovery



Natural law, discovered by Robert Boyle: Increased pressure of gas is followed by decreased volume of gas and vice versa

Of course, we have the formula $\frac{V}{V_1} = \frac{P_1}{P}$ which says the same, and shows too, that the relation is of a "linear" character. However, for educational purposes - and for bridging the languages the line in semantography has its merits too, even more: it shows on both sides the symbol for gas. The mathematical formula can be "over-strained" and tells not more the truth. An extremely high pressure will not bring an extremely small volume of gas, but will produce a liquid. This train of thoughts will lead us to new symbol compounds.



Nature
Symbols for meanings beyond our
comprehension in their entirety



Truth



mind
reason



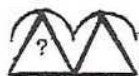
doubt
rational



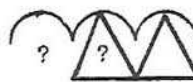
truth
in a human's mind



science



a theory



a hypothesis



a scientific hunch
feeling, thought emerging
from the ID into the EGO
the ID)

Instead of the outline of a heart (our colloquial symbol for the "Subconscious"), we use here the medical term "Preconscious". The symbol depicts the "opening up" of the "Subconscious". More about this symbol in the next chapter, dealing with the language of Medicine.

Before we evolve international physico-chemical tables, we have to evolve a few symbols for mathematical notions. We need only a few, because of all the sciences, mathematics is completely symbolized; the symbols are the same for all languages and the "truth" expressed in mathematical language is valid in any country, and, ^{most probably} on any celestial body in the universe. Mathematics is at the basical structure of Nature and ancient and modern mathematicians consider it to be the "language" of Creation (or call it Nature, if this term suits you better).



The structure of Nature
The numbers in the Universe.
Their relations (1 + 2 = 3) expressing
eternal Truth, the language of Creation and Creator

I don't think that anyone will term me a "numerologist" I want only to express that mathematics is the science of sciences. The word in the Greek of old means Science. In a world of strife and dissension, even among the churches, it is good to know that there is a basis of truth from which we can build up that new faith we need, the teachings of the great religions, reconciled with modern science.

I have chosen two numbers one above the other $\overset{1}{0}$ in order not to mix this symbol up with any number we have to write. As it stands, this symbol has a higher meaning. We know that the invention of the zero number 0 has been one of the major achievements of the human mind. Out of the meaning of Nothing emerges the meaning of One, dwelling over and above the Nothingness. This is the meaning of our new symbol $\overset{1}{0}$ and it leads us straight to the first lines of the Bible. We know that ^{some} preachers of our religions were mathematicians.



the science of
mathematics

1
one



knowledge of
mathematics

$\overset{1}{0}$
a cardinal number
a cipher, figure, etc.



to calculate
to figure out

1.
first
an ordinal number
(in general)

or
simply



to calculate
to figure out

number
(international)

This symbol # is mostly used in the United States to say: number one #1 esp. in commercial dealings, as for instance: case # 1 or catalogue # 3674. We have used this symbol in previous chapters and we can even evolve it from our symbol elements.

We start with our symbol for equal =, then use the dividing line / which we use in fractions 1/2 or %. Repeating this dividing line, we indicate something different from the meaning of equal, something we must give different numbers #. We may even forsake our $\overset{1}{0}$ indicating opposite meaning and may agree that unequal, different should be symbolized in this way # instead of $\overset{1}{0}$. The oblique line can be interpreted here also in the meaning of crossing out the equal symbol.

We need the depicted symbols in the coming international physico-chemical tables, which are shown on the next page.

Physico-chemical tables are one of the most important tools of the scientist, the chemist and the pharmacist, as well as the engineer, the technical designer and inventor. They give him at a glance the property he wants to know of a chemical or a steel shaft. Such tables need revision almost every year, in order to be up-to-date with new research. Their compilation is costly and therefore they are quite expensive. Small nations cannot afford their printing as the number of potential buyers is very limited. International tables which can be read in all languages would therefore fill a need. When printed for sale over the whole world, they ^{could} become so cheap as to ^{be} within easy reach of the poorest engineer and craftsman. They would not have much difficulty in reading them, because today almost the whole of the table is already printed in international symbols, mostly numbers. Semantography would be used to translate the few lines, which accompany every table and explain what the figures in the various columns mean. It would be easy enough.

The particular name of a chemical in a particular language could be omitted. As pointed out before, HCl is called hydrochloric acid in English, acide hydrochlorique in French, and Chlorwasserstoff in German, but it ^{is} also called Salzsaeure in German and muriatic acid in English, not to mention other languages. Different endings bewilder the student, because in chemistry, different endings mean totally different substances: chloride, chlorite, chlorate.

(386) An American or English publisher who undertakes to publish such international tables, would, of course, put the English words underneath the symbols. Thus, the tables could be read (disregarding the symbols) everywhere, where English is spoken. A French publisher may add the French words instead of the English, and the book could be used (without the symbols) in the whole French empire and anywhere, where French is understood. But in the same time, the symbols would enable science workers of small nations (which cannot afford an edition) to read the tables in their own mother tongue. In regard of chemicals, we could add the evolved Latin names, but nobody cares about them, and most students don't learn them (i.e. potassium acetate).

INTERNATIONAL PHYSICO - CHEMICAL AND ENGINEERING TABLES

readable in any language

		Chemical		Elements					
chemical symbol	semantic symbol	atomic number	total of protons & neutrons	atomic weight compared w/ Oxygen = 16 (1940)	gas liquid solid metal	melting point in °C (760mm Hg)	valence	name in Anglo-American	
A	Ⓐ	18	40	39.994	⊕	-	0	Argon	
Al	Ⓐ	13	27	26.97	⊕	660°	≡	Aluminium	
As	Ⓐ	33	75	74.91	⊕	Sublimation	≡	Arsenic	

Heat of solution
of salts of organ. acids & bas.

1 g T x 0 H₂O
1 g-mol diss. in 200 g-mol H₂O

Chemical	molec. w.	kcal
CHKO ₂	84.1	- 0.9
CHNaO ₂	68	- 0.5
CHNH ₂ O ₂	63	- 2.9
Ca(CHO ₂) ₂	65	+ 0.3

Observer: Berthelot

Gas pressure at different temperatures

Figures are manometer readings cm Hg

Temp. °C	SO ₂	NH ₃	SH ₂	CO ₂	N ₂ O
- 25	37.4	110	375	1300	1570
- 5	94.7	262	707	2345	2460
0	116.5	318	821	2700	2740
+ 5	142	383	950	3070	3080
+ 25	292	748	1600	5020	4670

Observer: Regnault

Boiling point of water at diff. air press. (manomet. read.)

Temp. °C	mm Hg	Temp. °C	mm Hg
1.3	10	47.2	80
22.4	20	49.6	90
29.1	30	51.7	100
34.2	40	53.6	110
38.3	50	55.4	120
41.7	60	57.2	130
44.6	70	58.7	140

Observers: Regnault, Claassen

Weight and Resistance of Wires of Copper

Figures for 1 m Copperwire, specific weight

Diameter	Weight	Cross area	Resistance	Length
mm	g for 1m	mm ²	Ω f. 100 m	in meters
0.1	0.070	0.0078	211.6	0.476
0.5	1.747	0.1963	7.46	11.82
1.0	7.000	0.7854	2.11	47.14

The sceptical reader should consider this: The tables shown above are full of symbols which are already internationally recognized, like 123, H₂O, g, kg, °C, mm², ccm, Ω, cal, mm Hg, etc. But these symbols did not exist - some years ago. By great conscientious efforts of scien-

tists, who looked ahead, these symbols were chosen and agreed upon. Now they seem natural. Symbols in semantography are only the final step in the line: to provide a complete written language in which every meaning could be expressed. The small fraternity of science workers in the middle age had their Latin to write letters to each other. The great fraternity of science workers of all nations need a simple tool which could do the job of Latin in correspondence, but in the same time, would not be so tedious in learning as Latin seems now. Semantography may provide a comfortable tool, to be handled by each scientist in his comfortable mother tongue, and herebelow is an example of such a correspondence.

LETTER OF A DANISH AGRICULTURAL CHEMIST TO HIS PORTUGUESE COLLEAGUE


"In my own field I have had occasion to see the way in which excellent works written in Danish which might have exerted a deep influence on contemporary linguistic thought had remained practically unknown outside of Scandinavia."


Otto Jespersen (23)

Otto Jespersen, whom I quoted above, was not only one of the greatest of modern linguists. He himself was a prominent pioneer for an international auxiliary language. Together with Wilhelm Ostwald, the great Chemist, he worked for many years in the committees on Esperanto, Ido, etc. and he himself put forward another proposal for a world auxiliary, which he called Novial (Nov = New, International Auxiliary Language).


It would have been better if I would have printed the lines in semantography, completely separated from the lines in alphabetical writing, in order to show the beauty of their simplicity. However, I know how scientist peruse books. Hard pressed in regard of time, and overwhelmed by the multitude of new books and scientific magazines, he can only thumb through the pages and read a paragraph here and there. Naturally, he would most probably be attracted by this chapter on chemistry and would try - without the knowledge of the foregoing chapters - to read the lines. It might well be, that his impression would lead to a prejudice, because he would not be able to read the lines "right away". The author is very anxious that the reader should not be prejudiced in such a way. Would you dismiss lines written in Portuguese or Danish or Russian, because you can't read it "right away"? Experiences with my friends have taught me, that people expect semantography to be so simple, that it should be understandable on first sight. The symbols are "almost" self-explanatory, if you know the elements, and a bit more.


To enable the casual reader to guess the meaning of some symbols I have therefore printed the alphabetical lines beneath the symbol lines. Again, these symbols are exaggerated in size. With the semantography typewriter, they should be much smaller. I have chosen a few of a more general character. Some explanations of symbol compounds are given in brackets.


 > |


 Arriaga,


Cøbenhavn 15 - 2 - 1948


Dear  Mr. Arriaga,
























I received a sample of wheat from your agricultural research station.


 (stalks on earth = field)




































I analyzed the sample and was surprised about the high percentage. I compared


 (chem. division)




















the percentage in relation to the sample which you sent the year before.

 (sun cycle, past)

THE SYMBOLS SHOWN BELOW ARE FIVE TIMES LARGER THAN

\perp_{1+} $\heartsuit \circ \uparrow$ + $\circ \heartsuit \uparrow$ > \perp_{2+} \longleftrightarrow

My admiration and congratulation to your success .
(eye up) (mouth speak of joy)

\perp_1 \curvearrowright \vdash \perp_{2+} \wedge > \triangle \odot \times \triangle
I am certain that your work of research is of much (help support)

> | $\square ?$ > $\square ?$ > \circ > $\square \circ$
towards the solution of the problem on food in Portugal .
(closed) (open) (mouth, earth) (flag)

> .. \odot \wedge $\square ?$ < \perp_{1+} $\triangle \div$ \square :
Here is the result of my analysis :

\sim Moisture	H_2O	13.26 %
$1. \wedge \div \ll$ Starch	$(C_{12}H_{20}O_{10})_x$	66.52 "
\odot Nitrogen	N	1.91 "
Protein (N x 5.7 )	.....	10.89 "
Cellulose	$C_6H_{10}O_5$	0.72 "
\approx Fat(oil)	.....	0.91 "
$\heartsuit \circ \uparrow$ Sugars	$C_{12}H_{22}O_{11}$, $C_6H_{12}O_6$, $C_{12}H_{22}O_{11} \cdot H_2O$ etc.....	2.12 "
$\square | \cdot$ Ash	K_2O , MgO , CaO , Fe_2O_3 , Al_2O_3 , P_2O_3 , etc.....	0.34 "

\perp_1 $\heartsuit \uparrow (?)$ \vdash \cdot \circ $|| =$ \perp_{2+} \wedge $\square ?$
I hope that these figures equal your results .

? : \perp_2 \rightarrow | $\square \boxtimes$ \square \rightarrow \leftarrow \triangle < \wedge \times
Are you coming to the international congress of agricultural chemists
(all countries) (science meeting)

> Paris > $D7$ \perp_1 $\heartsuit \uparrow$ $\rightarrow \leftarrow$ \perp_2 $\cdot <$
in Paris in July ? I shall be happy to meet you there .

\perp_{2+} $\heartsuit >$
Yours sincerely
C. Sorensen

THE PORTUGUESE CHEMIST ANSWERS

♡> | ^ Sorensen

Lisboa 22 - 2 - 1948

Dear Mr, Sorensen,

× ♡↑ ⋄ ⊥₂₊ ⊞ + ↗ ÷ □
Many thanks for your letter and analysis .

⊥₁₊ % < protein: 11.86% , ≠ > ⊥₂₊ % : 10.89 % .
My percentage of protein is: 11.86% different from your percentage: 10.89 % .

⊙? , ⊥₁ ⊕ ≠ ⊕ . ⊥₁ ⊕ ") ~ ⊕ →"
May be, we use different methods. I use "turn of waves of light (light=sun, eye) rays"

⊘ : polarization . ⊥₁ ⊕ + C₂H₅.OH (65%)
termed: polarization . I mix the flour with C₂H₅.OH (65%)
(wheat, grounded)

⊥₁ ⊕ + ⊕ ⊕ ⊕ ⊕ . ⊥₁ ⊕ ⊕
Then I filter and observe & measure polarization. (turn of lightray) Then I add

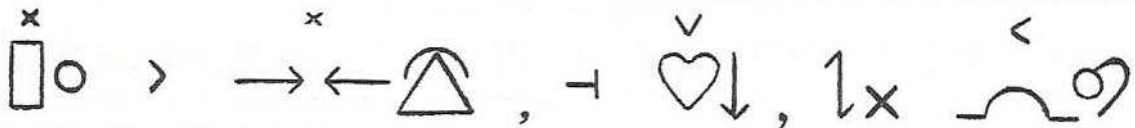
⊕ < Millon : [Hg ⊕ HNO₃] , ⊕ ⊕ . ⊥₁ ⊕ +
reagens of Millon (Hg dissolved in HNO₃), causing precipita-
tion. I filter and

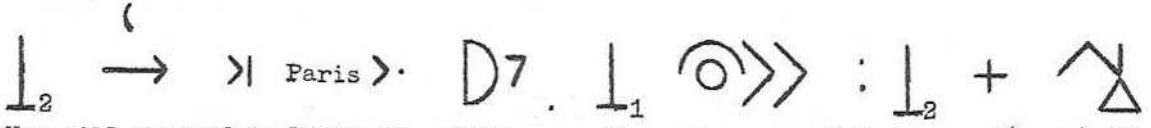
⊕ ⊕ ⊕ ⊕ ⊕ ⊕ . ⊕ : ⊥₂ ⊕ / ⊕ < Kjeldahl .
polarize again . Have you used the method of Kjeldahl ?
(question:)


⊥₁ ♡↓ . ⊥₁ - ! → | Paris . ⊥₁ ⊙ 1 ♡ ⊕
I am sorry . I shall not come to Paris. I speak only Portuguese .
(mouth) (language=mouth, ear)

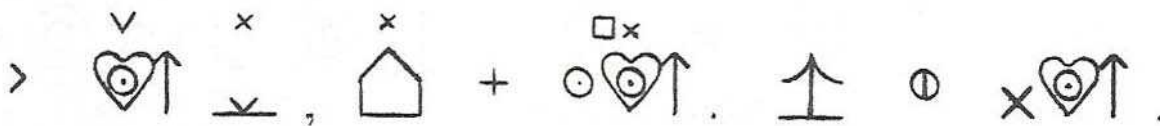
⊕ ⊥₁ - · ∨ ⊕ ⊕ + ⊕ ⊕ ⊕ ⊕ . ⊥₁ ⊕ ⊕
Therefore I am unable to understand speakers and discussion. I prefer to read
(s.p.246) (into, knowledge) (more) (eye, page)

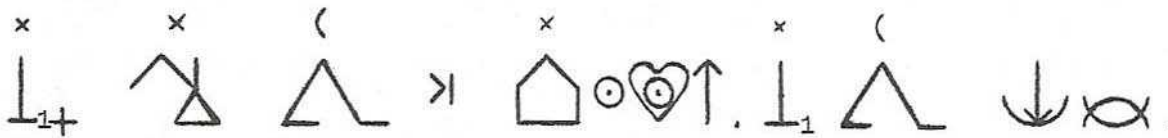
Note: The various symbol compounds for the meaning of "polarization" are shown to explain that we can reduce the compound. We may even abandon the symbol for "to measure".



 reports about science congresses . but deplorably, few are translated .
 (bridging lang.)



 You will proceed to Paris in July. I propose that you and (your) wife
 (p.302) (p.280)

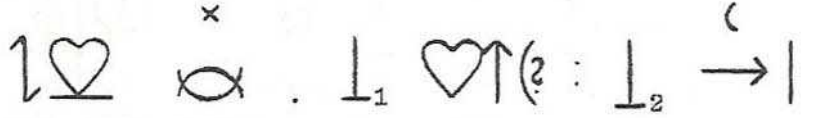

 accept my hospitality and come to Lisboa. The town (is) full

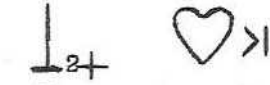

 of beautiful places, buildings and pieces of art. The country- is delightful .
 (eye, heart) -side


 Our wives shall go to the art galleries. We will go fishing .


 I know a few words of French and English .
 (parts)


 Besides we will converse in writing semantography. This silent method will not
 (pen) (pen betw. sky & earth)


 disturb the fishes . I hope you will come .


 Yours sincerely
F. Arriaga

SEMANTOGRAPHY FOR THE
FIGHTERS OF DEATH AND DISEASE

"From upward of 30,000 Latin terms, about 4500 were selected... After each term had been subjected to a thorough re-examination by the committee, the whole list was presented for final criticism to the anatomical society at its annual meeting in Basle in 1895. After careful consideration it was finally adopted. It has since been known as the "Basle Nomina Anatomica", or by its official abbreviation BNA...

It is safe to say that the greater part of the recent anatomical literature of the world is accessible only to those who have acquainted themselves with the BNA...

A system which so nearly fulfills all demands has naturally become an anatomic language... Since the BNA has become the language of the anatomist, may they not hope for the co-operation of the clinicians in clearing the field of the thousands of useless synonyms? At the present day it is scarcely possible to find a student's textbook on any clinical subject which evinces the slightest concern as to the uniformity of its anatomical terms."

Albert Channcey Eycleshymer (82)

The fraternity of biologists and men of medicine have, by a conscious effort, upheld the tradition of Latin as the universal language of science. However, the study of Latin and Greek has declined considerably, and today there are only a few scientists, who are able to write a letter or to converse in Latin, as they did centuries ago. This is partially due to the enormous spread of medical research and treatment to all countries of the world. ^{thousands of} Hundreds of doctors work in all countries, assisted by even more numerous nurses and other people on the staff of hundreds of thousands of hospitals. Almost all of them can speak ^{no foreign language but} only their mother tongue. Nevertheless, the Latin names of the parts of the human body and the Latin names for the diseases, etc. are used all over the world.

The first book was almost entirely devoted to the aspect of semantography as a help and medium for international co-operation in ^{scientific and} medical research. On page 65 ff, I have outlined a world-wide distribution of short reports written in semantography, issued by the universities, hospitals and private scientists, ^{reports} which would be of great assistance in the furtherance of medical progress. What I have forgotten to mention in that chapter is, that the various university institutes and hospitals, who issue their sheets, would print the words of their native language beneath the symbols. Thus the university of Buenos Aires, for instance, would print their reports in semantography, with the Spanish words underneath each symbol. The Argentinian doctors, students, nurses, etc. would therefore be able to read the abstracts in Spanish, disregarding semantography. But the symbols over the native words would be there, impossible to be overlooked, and therefore the readers would acquaint themselves with the symbols, and would then be able to read reports from the United States or say Sweden. The Argentinian reports would be readable in all Spanish speaking countries, but in the same time, the symbols would be readable in any other language. It is clear, that the sentences in the native language would have to be subjected to the simple sentence rules of semantography. Sometimes, awkward sentences would be the result, but this would be offset by the advantages resulting from printing the symbols and the native words together.

Apart from the advantage of getting the latest research reports in each field for almost nothing (price of paper only) or for nothing (free exchange of these reports subsidized by the universities, foundations and governments), there is the even greater advantage, that medical researchers all over the world, would be able to correspond with each other, thus bridging the language barrier. Imagine a doctor in Peru, bent on a lifelong research on a particular disease, ^{he} learns through a few lines in a medical journal, that another doctor in the Sudan, or Siam or anywhere else in the world, is bent on exactly the same research. To get in touch with that other man, would be of paramount importance to the doctor in Peru and equally to the doctor in the Sudan or Siam. If they speak two different languages, the matter is hopeless. In very many cases, it would be costly, difficult or almost impossible to find a translator who speaks Spanish and Siamese perfectly, and who is also a doctor and well steeped in that particular kind of medical research. If this is not the case, translation will lead to non-sense.

I hope that the reader who followed me diligently through all the 391 pages of these two books, will forgive my repeating statements on the advantage of semantography, which I have written more than 300 pages back. I think of the doctor, who is hard pressed with time, and who may perhaps only read this chapter. He may perhaps be convinced that the symbols of semantography are simple and could be used for ordinary writings. I want to convince him, that it would be quite easy to write reports on medical research, by using the Latin words, (which are already internationally understood and used to indicate the parts and afflications of our body) and filling in the gaps with symbols for the ordinary words. For instance, if a doctor wants to write

"I observed pelvis endometriosis in 2 abdomen operations"

he would need the symbols only for the not underlined words. The underlined are the Latin terms. Those simple ordinary words of a descriptive character are easily symbolized with the symbols of semantography.

Before we try practical writing, we shall consider the use of the adjective in medical reports. A great deal has been written about the mischiefmaker in all languages, the adjective, which we have termed human EVALUATION, I must repeat a few words here.

We have "genuine" adjectives, for instance the term "cold". It refers directly to a human EVALUATION, made with one of our senses and the brain.

Apart from these "genuine" EVALUATIONS, we have those, which we derived from real chemical THINGS or real physical ACTIONS. For instance the term "ice" refers to an exact chemical THING, which exists on this earth, whether man is there or not. From the word "ice" we derive the adjective "icy". However, we never use this term with its "parent term"; we never say "icy ice". We use this term sometimes in connection with other words, for instance "the icy surface of a lake". Now, it may be, that the lake is frozen, and covered by real ice. But, the above expression could be and is used also for an impression, as if the lake would be covered by ice, but is not. Sometimes, the surface is perfectly smooth without a ripple, and has a whitish reflection of the cloudy sky. It looks "icy".

Still, in the above expression, we deal with a lake, a mass of water, which is sometimes converted into real ice. However, if we use the expression, "the icy glass surface" or "he had an icy expression on his face" it is clear, that the adjective "icy" refers to an abstraction which we have made, an EVALUATION from the real THING, which EVALUATION we have added to quite another THING. Such a transformation never takes place in nature, that means, outside of our skin. It is an EVALUATION made in our heads.

We should therefore be perfectly aware of the vagueness of the adjective, and should not use it, where we can use the simple word for the real THING. We can say "abdomen operation", instead of "abdominal operation"; or "surface of the peritoneum", or equally well "peritoneum surface" but not "peritoneal surface". The last expression may usually refer to the real peritoneum, but it may be sometimes used to denote an abstraction, a surface "like the peritoneum surface".

There is another point why we should not use the adjective ending, when we can use the term for the real THING. The word "peritoneum" for instance is used in many languages, but the colloquial use of it as an adjective differs with different languages. The speakers use the adjective ending of their native tongue. The English say "peritoneal" or "peritonic", the Germans say "peritonisch" (equal to the Anglo-Saxon ending -ish) and the French say "peritonique". Now, this is serious in regard of inter-linguistic communication, because we deal with terms in Latin, and this is a language, in which different endings express different meanings; cavum means a cave, cavus means hollow, and cavere means to hollow out. In medical Latin, special different endings have been internationally adopted to mean special things, for instance, the ending -itis denotes a "disease", specially an inflammatory disease, as for instance "peritonitis", an inflammation of the peritoneum.

We shall therefore agree, that we shall not use such adjective expressions and endings in simple medical reports. There are the parts of the body, real chemical THINGS. We shall see later on, that there is already too much of human EVALUATION in medical terms. We do not need adding to it, when we can use the term for the real THING.

We have to do this, because even the term of the real THING is sometimes ambiguous. There are different kinds of "peritoneum". There is the "peritoneum parietale", also termed "abdominal peritoneum" and the "peritoneum viscoerale", also termed "intestinal peritoneum". Instead of using the English ending "-al" we could say in Latin "peritoneum abdominis", but this is already "too much" of Latin, and ^{some} doctors prefer to use the

adjectival ending of their native tongue, to the detriment of inter-linguistic understanding.

In semantography, we have used the old-established mathematical relation symbol \langle to indicate a relation between two meanings. Thus we can write

peritoneum \langle of abdomen peritoneum \langle of intestinum surface \langle of peritoneum
and surface \langle of peritoneum \langle of intestinum
or $\square^2 \langle$ peritoneum \langle intestinum

The last expression is "total semantography". We have used the Latin words for the anatomical parts, and symbols for the other meanings. Incidentally, they are mathematical meanings, which doctors know already. They should not have much difficulty to learn to handle the other symbols of semantography.

In search for a practical example, I entered the public library and asked for a few copies of the British Medical Journal. I did not select special sentences, which would look easy enough to translate. I opened one copy and hit on page 1178 of June 19, 1948. There I found an article about "Aberrant endometrial tissue and intussusception". I wrote down haphazardly a few sentences from the opening paragraph, also from the case report and the pathological report. These sentences I shall translate into semantography in the coming paragraphs.

I wish to state, however, that I have not learned Latin in school (having been in a high school, preparatory to the technical university). Consequently I had to learn the Latin and Greek terms of chemistry and physics the hard way. The words in Latin are mostly meaningless to me for this reason, and I am afraid that - in spite of diligent reading and bothering some of my friends - I might make some mistakes in the coming paragraphs. Study of the literature about medical nomenclature, has shown me that there are considerable differences in terms, meaning the "same thing". Nevertheless I ask for forgiveness beforehand.

The article starts as follows

Aberrant endometrial tissue and intussusception.

by E.M. Southern M.R.S.S., D.R.C.O.G.

"Intussusception of the ileo-colic variety in an adult with aberrant endometrial tissue at the apex of the entering ileum, is an unusual occurrence. V.B. Green Armitage (1933) reports that a state of pelvic endometriosis existed in 8.9% of a series of 1000 abdominal operation cases. Most instances in which aberrant endometrial tissue has been found to involve the peritoneal surface of the intestine are reported in locations about the sigmoid colon and recto-vaginal septum."

After dis-connecting the adjectival endings from the above Latin words and perusing the book of Eycleshymer (82) on "Anatomical terms" I found the following
Terms of the Basle Nomina Anatomica:

ileum (or intestinum ileum), colon, pelvis, peritoneum, abdomen, intestinum, colon sigmoideum, rectum, vagina, septum.

The word "tissue" is used in English, and the equivalent native words are used in other languages. I shall therefore use the proper Latin term tela.

The word "endometrium" is not found in the BNA, but I was informed that this is the proper Latin term for the mucous membrane lining the uterus. I shall use therefore this Latin term. Endometritis is according to Webster (28) the term for an inflammation of the endometrium. However, the author of the article above, uses the word "endometriosis". This term is not listed in Websters, but this dictionary lists the meaning of the ending -osis, as indicating in pathology an abnormal or diseased condition, furthermore a physiological increase or formation. As these meanings tally with the above paragraph I shall use the term "endometriosis" as the current international term.

There remain two medical terms "aberrant" and "intussusception". I am informed that these are international. I shall use them, but I shall afterwards outline how they can be expressed in symbols.

From the foregoing chapters on sentence construction it will become clear, that we have to re-write the paragraph. We have to form simple sentences, which would not present difficulties to the readers of various languages. The sentence form: Agent - Act - Object should be our guide. In a later chapter, it will be proved that it is that "highbrow writing", the use of very long sentences, which makes it difficult to understand much which is written ^{even} in our own mother tongue.

There is another point which should guide us. If semantography becomes a practical reality, it will go slowly under way, and every writer will slowly compose his sentences. Just as a child writes very short and simple sentences, so does a pupil, learning a foreign tongue and so would the writer of semantography proceed.

We shall therefore re-write the paragraph, perhaps as follows:

"An unusual occurrence is : intussusception of ileum and colon together with aberrant tela of endometrium, which is at the apex of the entering ileum. The patient is an adult. V.B. Green Armitage (1931) reported: 8.9% of 1000 operations of the abdomen were endometriosis of pelvis. Places of aberrant tela of endometrium affecting the surface of the peritoneum of the intestine were about the colon sigmoideum and the septum between rectum and vagina."

I believe that the above sentences could even further be simplified. The last sentence contains a repetition of previous saying. It should be understood that the abstract (to be written in semantography) would be composed by specially trained persons

who know semantography well, and who can make a simple abstract, saying in a few words the result of the investigation. I believe, that such a short abstract in symbols (with the phonetic words underneath) could be printed at the beginning or end of any article in any medical journal, written in English or any other language. Thus, all medical journals in any language would be of interest to any doctor and researcher, as they would be able to gather the contents of any article from the abstract in semantography. Besides the words underneath the symbols would acquaint them with the terms in the language in which the journal is written.

We shall now write the above sentences in semantography. The casual reader should be aware, that the symbols used are explained in full in foregoing chapters, and some in the pages to come. Don't scorn symbols, just because you can't read their meaning right away.

The size of the symbols is smaller than in foregoing chapters, where they are exaggerated to show their simplicity. The text in semantography plus Latin names is underlined.

Aberrant tela < endometrium | + | intussusception.
Aberrant tela of endometrium together with intussusception.

◁ E.R., Southern M.R.C.S., D.R.C.O.G.
 by
 ⓧ Ⓜ Ⓜ : British Medical Journal
 from British medical newspaper: British Medical Journal
 □ 1178 19. D6 1948
 page 1178, 19th June 1948

∖ 1 ⊙_{xx} ⊙ ⊙ : intussusception > ileum + colon | + |
An unusual occurrence is : intussusception of ileum and colon together with
aberrant tela < endometrium » ⊙ > apex < ileum, ⊕ . ∩ ⊙ ⊙ .
aberrant tela of endometrium, which is at apex of ileum, entered. Patient is adult.
V.B. Green Armitage (1931) ⊙ □ . 8.9% < 1000 Ⓜ > abdomen ⊙ :
V.B. Green Armitage (1931) reported : 8.9% of 1000 operations of abdomen were :

endometriosis < pelvis. $\overset{x}{\underset{v}{\downarrow}}$ < aberrant tela < endometrium $\hat{\triangleright}$ \square^2
 endometriosis of pelvis. Places of aberrant tela of endometrium affecting surface
 < peritoneum < intestinum $\textcircled{\circ}$ || colon sigmoideum + septum |·|
 of peritoneum of intestinum were about(near) colon sigmoideum and septum between
 rectum + vagina.
 rectum and vagina.

From the above example we gather, that the semantography symbols are only supplying the "mortar" for the "bricks" which are the terms in Latin, already known to the doctors the world over.

Now to the translation of a few sentences from the case report and the pathological report. Herebelow are the actual sentences taken from the above mentioned article

"Case report: The patient was thin, lacrimose, and miserable and was in severe pain, drawing up her legs and constantly retching and vomiting. The pulse was rapid, but regular and of good volume. The temperature was 98.6° F (37° C). The abdomen was uniformly tender and there was some guarding of the abdominal musculature. The white blood cells numbered 14,500."

Now the translation into simpler sentences in semantography.

$\square \circ > \wedge : \wedge \textcircled{\circ} \ddagger \hat{\circ} \downarrow \heartsuit \downarrow \Delta_3 \heartsuit \wedge \times \times .$
 Report about patient: Patient was thin, crying, unhappy. She suffered very much.
 $\Delta_3 \uparrow \Delta_3 \downarrow \Delta_3 \boxtimes \ominus \heartsuit \square \rightarrow \circ + \square \rightarrow \circ .$
 She drew up her legs. She constantly wanted to vomit and vomited.
 Pulsus $\textcircled{\circ} \times \otimes - | | \square \oplus + \ominus \ddagger :$ 98.6° F (37° C)
 Pulsus was quick, but regular and full. Temperature: 98.6° F (37° C).
 Abdomen $\textcircled{\circ} > . \boxtimes \downarrow \cup + \textcircled{\circ} \div \cup \wedge <$
 Abdomen was at all places tender and (there) was partial stiffening of
 musculi < abdomen. Cellulae < sanguis \ddagger 14,500 .
 musculi of abdomen. Cellulae of sanguis totalled 14,500.

The above sentences contained many words which we normally use in describing a patient's appearance. Consequently there are very few Latin terms involved, and even for these we could evolve simple symbols, as will be shown later on.

Now, the actual sentences of the microscopical description of the pathological report:

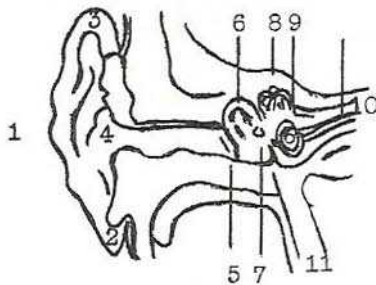
"Section of the ileum showed congestion of the mucosa and submucosa and some necrosis of the mucosa. In the muscularis there were small areas of typical endometrium, composed of glands lined with tall columnal cells in an abundant stroma."

$\textcircled{\circ} \triangleleft \textcircled{\circ} : \div < \text{ileum} \oplus \text{hyperemia} < \text{mucosa} + \text{sub-}$
 Observation by microscope: Section of ileum had hyperemia of mucosa and sub-
 mucosa + \div necrosis < ileum. $>$ muscularis mucosa $\textcircled{\circ} \text{I} \square^2 <$
 mucosa and partial necrosis of ileum, In muscularis mucosa were small areas of
 $\frac{va}{\div}$ endometrium " \oplus glandulae \wedge \triangleleft cellulae \dashv $| | \square \oplus \square \times \times$ stroma.
 typical endometrium. It had glandulae cover_{ed} by cellulae, long, like cyl- in much stroma.
 linders very

These lines of Latin terms, and symbols for the connecting words, may convince readers that medical reports and letters written in this way, may become a practical reality.

However, people may point out, that Latin is definitely on the decline. Less and less of it is learned in school and consequently doctors, especially those in small towns and villages who are disconnected from research and scientific intercourse, use more and more the terms in the native language. These terms are understandable to the people and have therefore a meaning, whereas the Latin terms have not. Such critics would object to the extensive use of Latin terms.

Semantography is adaptable to this proposition. The number of anatomical parts of our body is very limited. We could use the symbols of semantography to point out parts of the body and then attach some numbers. Every doctor may have a little booklet showing anatomical drawings of all parts of the body with numbers attached to each detailed part. Beneath such anatomical drawings the terms in the native language (and the Latin term) are printed with each number.



Anatomy of the Ear

Native medical terms expressed only with symbols & numbers

- | | | |
|-----|--|---------------------------|
| 71 | the external ear (auricle) |
<u>symbol for ear</u> |
| 72 | the lobe | |
| 73 | the tip | |
| 74 | the auditory passage | |
| 75 | the drum or tympanum | |
| 76 | the middle ear with the ossicles (hammer, anvil) | |
| 77 | the stirrup | |
| 78 | the semicircular canals | |
| 79 | the cochlea | |
| 710 | the auditory nerve | |
| 711 | the Eustachian tube | |

The little textbook on semantography for medicine would contain such drawings and the numbers. The book or booklet for Portuguese doctors would contain the Portuguese terms, and the booklet for Norwegian doctors would contain the native terms in Norwegian. Besides, the Latin term of the BNA would be printed alongside. Such booklets would also serve nurses, assistants and all other workers, who are interested in reading international reports/

If you think that it would be difficult to remember numbers, just think of how many telephone numbers you know by heart, and these consist usually of at least five numbers and two or three letters FX 4-3592, whereas here you have the symbol for ear, and a few single numbers only.

But the task could even be made easier. We have our little pointer and our symbol. Scanty as it is, it is still full of details which we can point out with the little arrow head, the pointer.



ear



cochlea
Nr. 9



auricle
Nr. 1



lobe
Nr. 2



tip
Nr. 3



auditory passage
Nr. 4

By using our little pointer we have eliminated the numbers 1, 2, 3, 4 and so we can reduce the total of 11 numbers to only 7, or we may add some more terms.

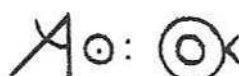
But we have further means to symbolize in outlines details of our organs. Take a look at page 118, where we have evolved the symbol for geometry and shown a few details of the eye.



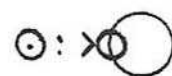
geometrical
drawing



geometry
of eye





iris
front view



cornea
side view

In using the colon (:) after the symbol for eye, we indicate that particulars of the eye are to follow, and thus, we may omit the symbol for geometry. It should be noted that the colon stands within a compound symbol, and not separate, in which case, it would have

a somewhat different meaning:

  :

I see : follows description^{of} what I see.

In other words, the context will give us the clue to the meaning, in case we want to economize with symbols and decide not to draw the symbol for geometry. It is obvious that we don't need (in a medical report on some eye disease or the like) to repeat the geometry symbol every time we refer to a detail of the eye.

I believe however, that the Latin terms are so international and so well known, that any doctor, intent on medical research and having a deficiency in regard to their knowledge would refresh his memory on this subject in order to follow all new medical literature. In some countries the native terms are preferred to the Latin terms.

The above symbols, augmented by numbers, pointers and detailed schematized drawings are intended for nurses, and medical assistants and also for students, not only at the university, but also at high schools. Students, who are taught the parts and functions of the body as part of their general education, should not be bothered by the Latin terms which are meaningless to them. On the other hand, symbols which are in fact schematized drawings can only be of help.




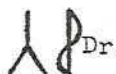

But there is another field for such symbols. Today, in small villages as well as in towns, not only in "civilized" countries, but also in China, India and Africa, there are "health centers" where advice is given for mothers and their babies, how to care for the body and its organs. The walls of such health centers are usually covered with large posters showing the anatomical structure of human organs and the human body. In countries where the population is literate, the health centers give out leaflets with anatomical drawings and many pictures besides. As semantography is advocated in this book to overcome illiteracy in "backward" countries with hundreds of varied dialects (which make the establishment of a uniform phonetic alphabet almost impossible) the idea of ^{US} semantography for such health directions and warnings, suggests itself. For the population, Latin terms are wholly out of the question, and for them, such symbols could be of good use. In the following paragraphs we shall evolve symbols for such purposes.

We need a good and simple symbol for the meaning of medicine and medical, and there is one already available, which we find on the walls of hospitals and pharmacies, on murals and on books, a symbol of thousands of years standing



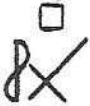

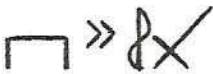


The rod of Aesculapius
the Roman God of Medicine

We can see this symbol, a rod and a snake around it, in all countries. It is an old established international symbol and we shall evolve a simplification of it, easily typable on our semantography typewriter.

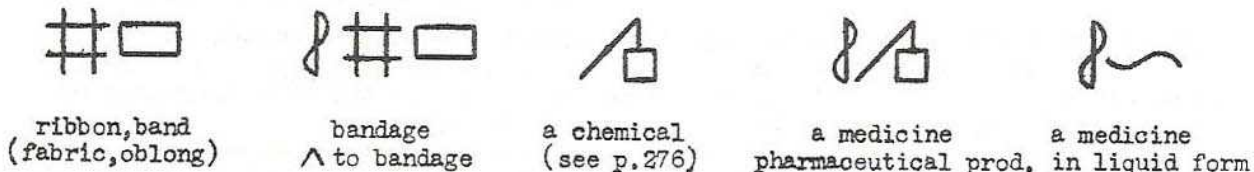
				
medical medicine	medical science	medical man (in general)	Doctor of Medicine	Dr. Smith

We could, of course evolve a symbol for Doctor, applying the symbol for university (see p. 242), but the word Doctor is already international, and understood even by illiterate people.

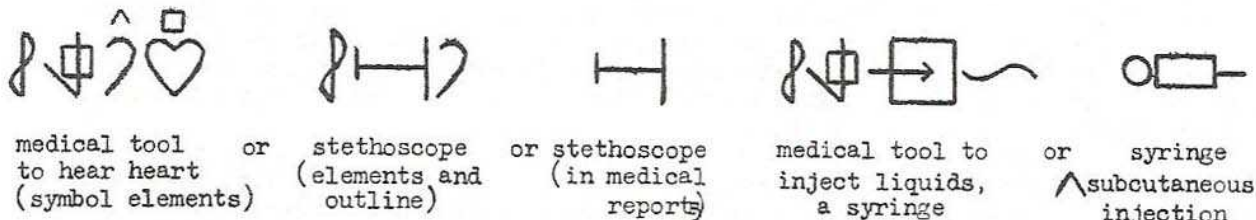
We can use our new symbol for medicine to stand before, or after (see later chapter) other symbols to indicate all sorts of things connected with medicine.

				
medical knife scalpel THING	operation medical cutting ACTION	table for medi- cal operation	surgeon a man	nurse female med. helper ("help" see p. 276)

For those readers who remember symbols from past chapters, there would not be any difficulty in recognizing the following compound symbols.



We can form other compound symbols, but we may find it convenient to evolve a simple auxiliary symbol which shows in simple lines the outline of the real thing.

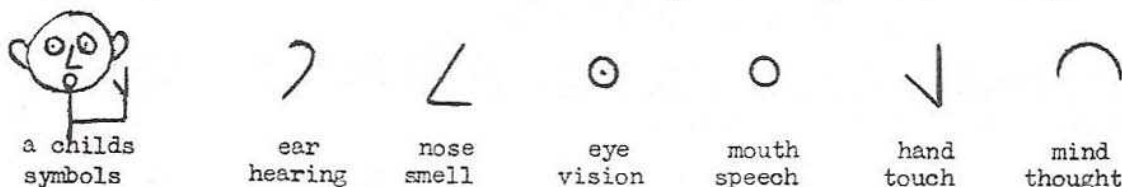


I hope that these few examples will convince the doctor reader, that we would not have much difficulty in symbolizing all tools which are used by doctors. For the symbols for electrical treatment with different means (alternating current with low or high frequency whether in a induction or condensor field, etc. etc.) please look up the foregoing chapter to see that semantography can cope with any term and apparatus used by the chemist and physicist.

We shall now dive into a series of simple symbols, which may invoke ridicule. Again I want to say, that doctors in their scientific correspondence shall and will use the familiar terms of Latin. However, for charts and leaflets of health centers, simple symbols as the ones shown below, might be helpful.

Semantography is a kind of picture writing, and thus reaches back to the primitive writing of the childhood of humanity. According to the biogenetic law, the embryo and later on the child repeats the whole range of evolution within a few months, or years respectively. The scribbling urge of a child represents the scribbling urge of the cave man, and sure enough their drawings are very similar in their outlines of the things of our world.

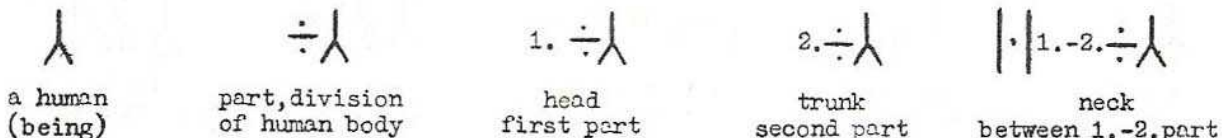
Realizing, that about 75% of all human beings on earth are still illiterate and "primitive" (whatever this adjective means) I have derived my most important symbols, (expressing the impressions of the world on man's senses) from the primitive drawings of children.



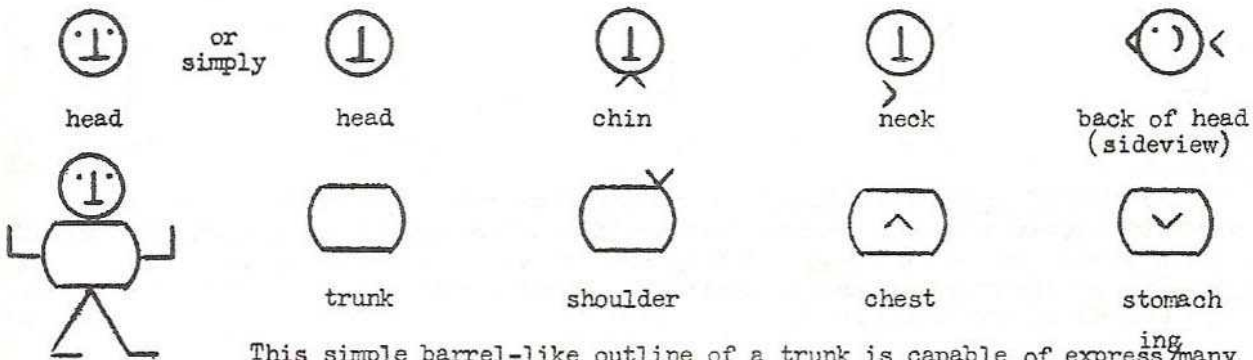
We should have no difficulty, by using our pointer and an occasional additional line in indicating parts of our organs in symbols for simple people.



For those, who scorn such "childish" outlines and don't want to hear anything about Latin terms, we can readily supply symbols, almost wholly expressed by mathematical figures and mathematical operation symbols.

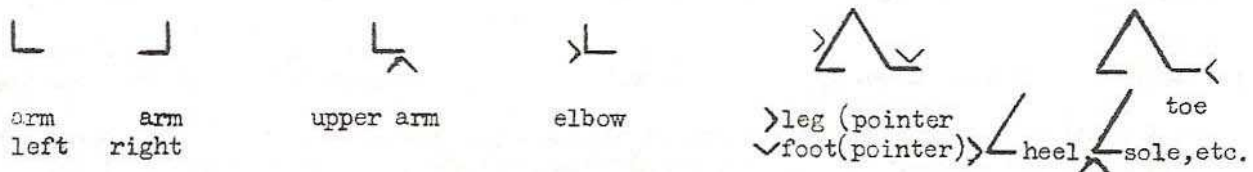


These numbers are not even arbitrary. ^{The} first and foremost part of a human body is the head, without which there is no life. A human being can live even with a mutilated trunk, (the second part), and he can live without the third and fourth group of parts, the limbs. However, for our purposes, (simple symbols for simple people, illiterate and uneducated,) we can use those simple outlines drawn by children.



This simple barrel-like outline of a trunk is capable of expressing ^{ing} many more details, by using our pointer to point from the outside or the inside of the symbol. We could thus depict the left and right shoulder (pointer outside) the shoulder joints (pointers inside), the hips, the leg joints, and other points. We are only restricted by the semantography typewriter, where to put a pointer.

The symbols for the arms and the legs are replicas of the Egyptian hieroglyphics denoting the same things.



Drawing these old Egyptian symbols, I just remember that two days ago, giving a lecture about semantography, a listener asked me in the discussion, whether I think it "progressive" to use such ^{Egyptian} symbols, and a picture writing in general, although ^{picture writing} has been since abandoned. Incidentally that man was a dentist. In my answer I referred to the well known fact that mummies have been found in Egyptian excavations, which show skilfully made tooth fillings. We still make tooth fillings as the old Egyptians did; why shouldn't we use symbols in a similar way as they did. Besides, we use symbols in mathematics and astronomy, in which the old Egyptians have been our teachers. We still use their findings in these sciences.

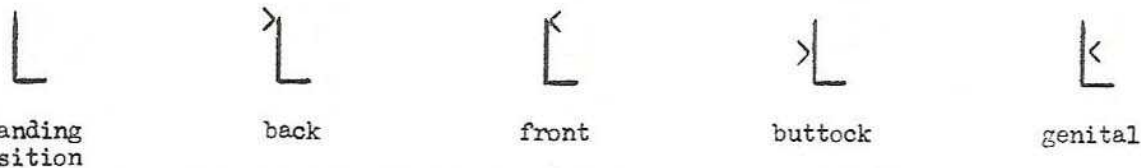
But we can go even further. I read somewhere that excavations of human skeletons from the paleolithic age have revealed that those "primitives" have performed trepan skull operations. Such operations are even today recognized as most difficult.

Doctors have often found, that some medicines of country folks, used by untold generations, are in line with modern medical research. Moreover, the evolution during the last 50,000 years is just a "second" in the history of mankind, and - as Sir James Jeans pointed out - "the human race is still at the very beginning of its career on earth". We should therefore not hesitate to use a mode of writing, which primitive man invented.

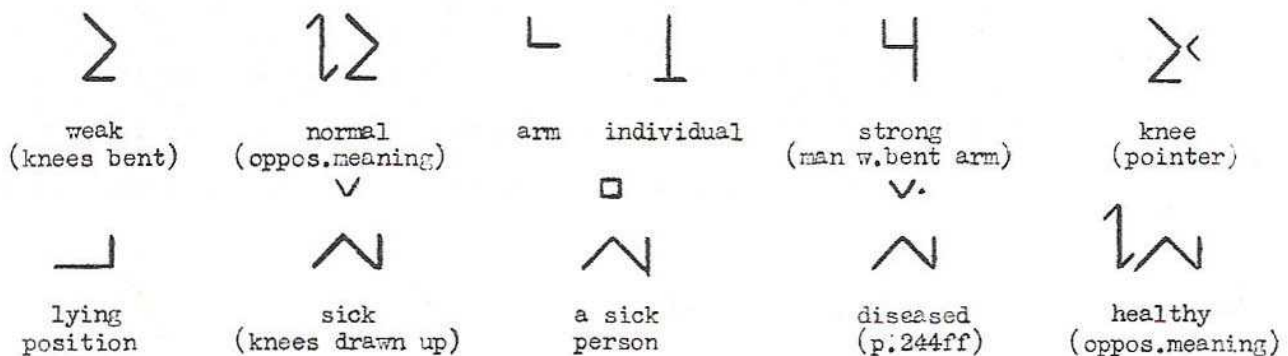
One more thought. It is generally not known that the oldest Egyptian hieroglyph, ^{ics} which we have so far found, ^{to a large extent} represent no picture writing, but an alphabetical writing. The picture of the lion does not stand for lion but for the letter L. Egyptian priests had given up picture writing, and used the pictures to stand for sound letters. See the explanation on p. 639. A picture writing can be understood by people of different languages. But once the pictures stand for sounds only, outsiders who can't speak the language, can't read them any more. Alphabetical sound writing divides the peoples of the world. (in language)

We shall use a modern picture writing for the opposite purpose: to ^{ing} unite the peoples of the world. Such a unification of very divergent peoples and races of different languages and habits, through a uniform picture writing has already taken place in China, and was - according to students of Chinese history - the main factor in bringing ^{ing} the largest nation on earth about. Just as the use of Latin as a common language has made all doctors of all nations a fraternity who work together, so may semantography bring the peoples together.

To depict the meanings of strong, weak, normal, healthy, sick, etc. in simple symbols might not be an easy task. Yet, we have seen in previous chapters (p. 274 ff) that it is simple. We have derived those meanings from an outline, indicating a standing, or lying person, etc. Our little pointer could again be of help, to indicate further details.



The meaning of weak can be formed by showing a man standing with his knees bent. However, the opposite of this meaning does not give us the meaning of strong. There are delicate persons, who are not weak. But they are not strong either. Their condition is just normal. The meaning of strong can be depicted by a man, having his arm bent, to show his biceps (as strong men usually do).

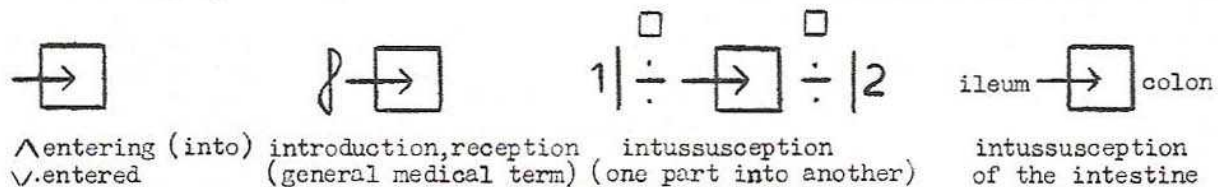


As indicated above, the term sick represents an adjective. Putting the THING indicator on top, we get the meaning of a sick being. However, in medical reports, we may omit the indicator, as the context would make the meaning clear. Even in ordinary language, we use the adjective for the real thing, as for instance in: a house for the sick.

The absence of a special symbol to indicate healthy has its good reasons. We usually take it for granted, when we are healthy. The symbols should remind us, that being healthy means the opposite of writhing in pain with knees drawn up. It should mean in ordinary language: not being sick thank heaven (s.p. 276)

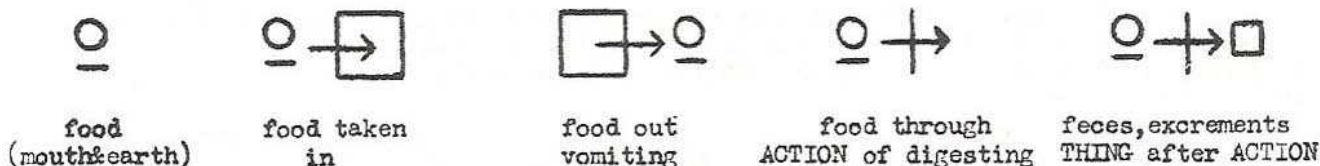
In the sample from the British Medical Journal (on page 393 of this book) we have used the term aberrant as being an international medical term. However, we can easily depict it with symbol elements. Aberrant is the adjective or past participle of aberration. In medicine it means not normal, diseased, etc. In our case of aberrant endometrial tissue we could use the little multiplication mark to indicate more, increase, or less, decrease, (see p. 113ff). We can then say, whether we have an increase of otherwise healthy tissue, or/increased, diseased tissue.

Now to the other term: intussusception. According to Webster (28) it means generally: the reception of one part within another. The particular medical term refers especially to the slipping of one part of the intestine into another. We have a very versatile symbol:



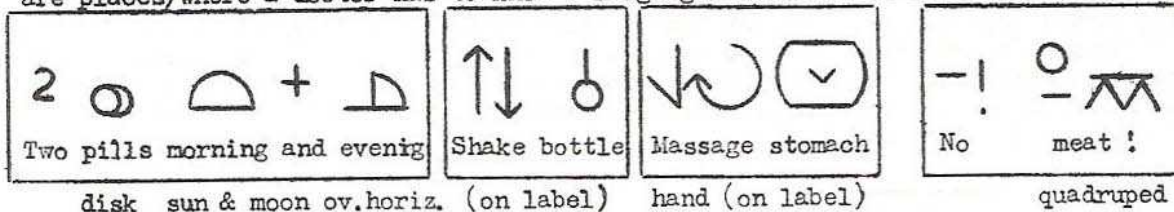
Using other Latin terms we can depict any such occurrence, including the coitus, although this Latin term is used today freely by laymen and students in discussing "sex". However we are concerned (in these last pages of the chapter on medicine) with simple symbols for the simple people, in order to instruct them in matter of health and hygiene. Leaflets and posters, notices and warnings can do useful work. In towns and countries with a multilingual population, or -what's even worse- in countries with great illiteracy, a simple picture writing, which can be easily taught and grasped, could be of help. Such symbols as

the following should be easily grasped, after a little teaching.



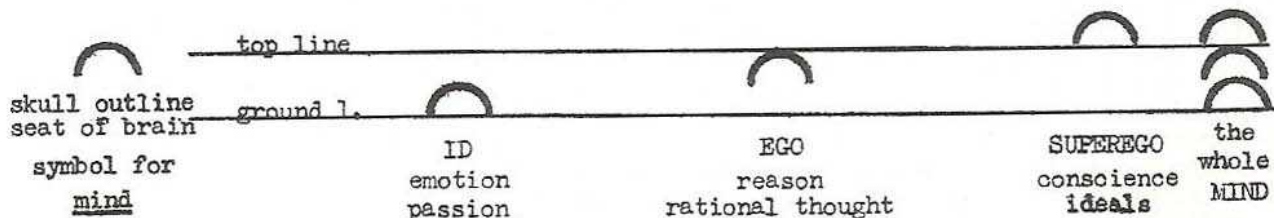
Naturally, it must be assumed, that a government with a multi-linguistic and illiterate population on hand, would intro^{duce} not only hygienic measures, but also classes to teach the illiterate, and semantography can be taught easily to children and adults alike.

Here are a few examples of symbols, which doctors can use in writing directions. There are ^{in Europe} places where a doctor has to know 6 languages in order to converse with the sick.

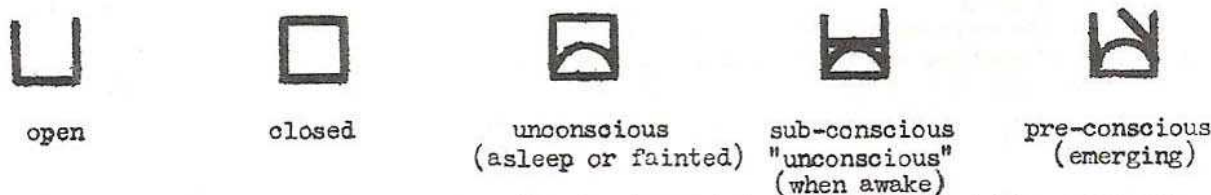


The doctor reader who has followed all foregoing chapters has noted that I based my symbols for the human mind on modern psychology theories. "This treatment", as one psychologist at one of my lectures recently remarked, "is the touchstone of the system of semantography." I hope to have the approval of doctors, even if they differ in regard to psycho-analytical theories. The reader is kindly asked to peruse the chapters p.161ff.

In this connection I want to take the opportunity to remove one great arbitrariness in one of the most important symbols. I have used the symbol of the heart to indicate emotions and feelings (passions). Although this is in line with popular usage (since man learned to think and to speak), we know today that the heart is not the seat of the "soul". The heart symbol is a very vivid and picturesque symbol, but we must abandon it, not only in semantography reports on psychological research, but also in every-day use of semantography. We may decide on the effectiveness of the following symbol proposals, which are all built on the outline of the upper skull, seat of the brain.








However, this simple system has one drawback. It can only be written distinctly on lined paper. On unlined paper, and in "sloppy" writing mistakes may occur. I want therefore to propose the following symbols to be used in psychological research, and also for other reports. I am well aware, that these symbols are only "crutches" for our understanding, yet they are based on what Freud and others said (see pp.164 ff)



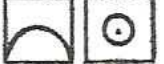







These symbols may well serve to indicate those states of mind, of which we are unconscious. The differences are clearly indicated, whether we become unconscious by fainting, or whether we are awake, but unconscious of what is hidden in the depth of our mind and is slowly emerging ("opening up") to become conscious. For better symbols see next page.

(402) Now, for practical purposes I would like to differentiate the symbols for "conscious". I am aware that Freud termed the "conscious" EGO, and assumed that it is our EGO, which makes us conscious of our passions and emotions. However, for practical purposes, I wish to distinguish between a consciousness about our emotions and passions, and another consciousness about our rational reasoning. In view of the fact, that there are no sharp boundaries, that "the EGO is part of the ID", the following symbols may be accepted on purely practical grounds.

Instead of the <u>heart</u> smb.		I propose			or simply		
	emotion passion		emotions (conscious)	reason (conscious)		reason EGO	conscience SUPEREGO

The heart symbol may remain in use for "small talk" in semantography, indicating "friendly feelings". If however we have to express an act of wild, abhorring passion, whether committed consciously or subconsciously, the new symbol is better suited, because it shows the mind on a lower level, still enclosed partially. The use of the enclosure symbol tallies with similar meanings.

							
awake (eye open & closed)	asleep	dreaming (combin. smb.)	blind (crossed out)	life (sun & I)	death (crossed out)	is (auxiliary verb) (see later chapter) (p. 405)	is

A very important application of the mind symbol will be used for the interpretation of the very important verbs to be and to have. The little word "is" has been recognized as one of the greatest mischiefmakers in all languages, and we shall deal with it in a coming chapter. As far as it is bound up with real existence and life, as for instance in the sentences "He is alive," or "He has life," there is nothing to worry about. However, the sentences "He is pernicious," or "He has perniciousness" are EVALUATIONS relative in meaning, and referring only to the EVALUATION of one particular mind, at variance with others.

Similarly, the sentences "It is endometriosis," or "He has endometriosis" may similarly express an EVALUATION of one doctor, at variance with the minds of other doctors.

For such and similar sentences in any other field we employ the mind symbol together with the symbol for to be and to have. This has been done in the translation from the Medical Journal on p. 394 ff. More about this in coming chapters p. 405 ff and 414.

On page 169 reference has been made to a paper by F.G. Crookshank, M.D., F.R.C.P. titled "The Importance of a Theory of Signs and a Critique of Language in the Study of Medicine", which appeared in the standard work on Semantics "The Meaning of Meaning" by C.K. Ogden and I.A. Richards (17). This paper indicates that the study of semantics may well lead to a **radical** change in the use of language in medicine, to new definitions of the meanings of terms like "disease" and others, and especially in the writings on psychology.

THE CONGRESS IN WRITING

"PARIS, 27th December 1947 (AND) Dr. Howard Wilson, United States Delegate proposed yesterday at the main conference of UNESCO, that international conferences should be held by way of correspondence, with a final short meeting.

Dr. Wilson made this proposal before the Education Sub-committee, as an answer to many complaints, in which UNESCO was accused to convene too many ^{international} sessions, which are costly and absorb much time."

During my twentyfive years as an industrial research chemist I have attended some national and international science congresses, and at some time I have acted as secretary at some international industrial meetings. I speak therefore from personal experience.

Here are a few personal observations. I have talked with colleagues and found that they too hold the same view.

International congresses have a vast itinerary of lectures. For almost a week many lectures are given; not one after the other, but simultaneously; not in the same building only, but in different ones, sometimes ^{situated} in different parts of the town. It is a physical and mental impossibility to attend so many lectures. The strain is too great and fatigue is the result. Many participants therefore do not attend most lectures, comforting themselves with the thought, that they will get the complete report with the abstracts (or the full text) of the lectures anyway. At home, they will study it in comfort.

But this attitude refers foremost to the lectures they can attend and understand; to the lectures held in the language they can speak. However, the other lectures given in Italian, Spanish, Russian, etc. etc. do not come even into consideration.

I have found that those lectures are well attended, which are held in the language of the country, in which the congress takes place. In a French town, the lecture hall will be crowded by students and professional men who live in that town and can understand a lecturer who lectures in French. In German towns, the German lectures were well attended, and so on in other countries. The members of the congress constituted only a small minority. With lectures in languages, not spoken by many, the whole audience constituted mostly of the other delegates from that country, with a few ^{additional} people attending out of courtesy to the lecturer.

Now, we know that this great handicap has been overcome in very important international meetings, by the installation of an electronic translation service. The listener puts on earphones and handles a switch on the table before him, which is marked: French, Spanish, Russian, Chinese, etc.

However, such a complicated and costly service has up till now operated only for congresses on the highest governmental level. May be, it will be available for small congresses too. Nevertheless, the number of translators and translated languages will be restricted.

There is another point to be taken into account. It is ^{for the translator} easy to follow quickly a speech on politics. Political language is mostly composed of allegations, accusations, threats and affirmations, brought forward in a language composed of "common place" phrases, such as we are all familiar with. Even if the translator makes a mistake, or uses a "stronger" or "weaker" word, the damage is not great.

With lectures on scientific research, the situation is completely different. We all know from own experience that it is almost impossible to follow and to verify the quick succession of formulae which the lecturer writes on the black board. Even if he is a brilliant orator, the best we get, is a rough impression of his work. Many sentences which he utters do not reach our complete understanding.

A translator who would be able to give a quick, sentence-for-sentence translation right into your earphones, must have the complete and perfect translation before him, made in advance. But - this would suit only those lectures, where the text is read. Many lecturers, however, don't read their text, they speak freely. According to their inclination, they dwell sometimes longer on a particular detail, than they had foreseen in their script. They write an additional formula on the blackboard, etc.

Such momentary translation is very difficult and apt to contain errors, which would foster the misunderstanding of the whole theme. Congress participants, tired of such stuff and tired of the oppressive earphones would decide to join the ladies itinerary.

The ladies itinerary, arranged for the accompanying wives of the delegates, includes visits to the museums and art galleries, to sightseeing tours around the town and into the country, and very often the number of men is higher than the number of participating ladies. After all, for many of these scientists, it is their vacation trip.

The municipalities of every town, conscious of the financial effect of such science congresses on traffic, business and municipal taxes are outbidding each other in facilities and fare reductions to get the arranging committee to decide on their town for the next congress. And there are hundreds of congresses every year, not only of science bodies, but also in any other field. And the town adopted, is grateful. There are receptions by the mayor, by the minister, by the head of the government, by the... etc. etc. Utter fatigue is the result. This turns out not a trip for study and enlightenment and not a trip of vacation and enjoyment.

Now, critics can refute my opinion by pointing out, that valuable personal connections are made at congresses by scientists of different countries. This is true, but these contacts are very unsatisfactory, consisting of some half hours snatched between meetings, speeches, lectures and receptions. Both scientists part with the assurance that they will write to each other.

This procedure refers, of course, only to people who speak the same language. With others the case is almost hopeless.

On the other hand, great friendships have been struck between two scientists, who did not meet, but found each other, by a letter referring to a note in some science journal. Later on, they come together, and then a personal exchange of views is made. You may study the two letters between a Danish and Portuguese scientist, printed on page 387.

Critics may again say, that the most important work of a congress is done in the committees. This again is true; but let us look at the procedure.

If a scientist comes up with a new proposal, for instance, for a unification of terms, for a new basis of measurement, for a new table of weights, etc, etc, the matter is decided upon, - but not right away, in compliance with the scientist who made the proposal. Instead, a committee is appointed to study the question. Quite often the committee contains names of scientists who are not present at the congress. The present elected members will have their first meeting, which will be very short (usually) and result in the nomination of the proposing scientist as secretary. This means, that he would have to do most of the work. The committee parts with the promise to exchange letters and memorandas about the subject. This correspondence may go on for one or two years, until the next congress meets.

At the next congress, the worked-out proposal is put before the congress and a resolution is motioned, that the decision of the committee be adopted. The voting is done by raising of hands, or otherwise, but those who vote are only those few present. The others are at some other function, at some private meeting, or at some sightseeing tour. Those present are usually sufficient in number to constitute the necessary quorum, and they will vote anything, sometimes out of sheer fatigue.

Should, however, some energetic members put up a speech of resistance to the proposal, then the matter will go back to the committee, which will thrash out the matter again in one or two years of writing letters and memorandas.

In other words: the actual work of international co-operation performed by international congresses is executed (for the greater part) by WRITING and READING of letters between scientists of different countries. This international co-operation is only possible between scientists who can write and read the same language. Otherwise, the most fruitful co-operation may be prevented by the great difficulties, presented by the language barrier.

Many scientists will agree that there are already too many congresses, that the travelling takes up much time, that their work at the university and the laboratory is constantly interrupted, and many of them advocate already a Congress in Writing.

Such a Congress in Writing would have other advantages. Not only would the members be able to study the proposals in undisturbed hours, and write suggestions which could have far-reaching effects. The voting could also be done in writing, and would express a much truer picture than that of a few fatigued congress participants, with so many others absent. Moreover, the language barrier could be completely removed, if we use an international symbol writing, such as semantography.

Mathematicians and chemists have no difficulty in writing to each other on scientific matters, because the important part of their writing is taken up by international symbols.

The author hopes, that he has proved in this book, that scientific problems could be expressed in symbols. Semantography should be considered to be the last step on a way used by science with such great success: the employment of international symbols.

Semantography covers the whole range of language in international symbols.

At many congresses the burning problem of an international means of intercourse has been raised, but all the committees, who studied Esperanto and other proposals, could not come to a decision. The mental handicap of overcoming the mother tongue is too great.

But such simple symbols, readable in any mother tongue could be easily acquired by the student of any science. It could be an item in any school, starting in the kindergarten even. The symbols are simple, no one can question this fact.

This proposal refers not only to scientific congresses. In other fields, semantography could be employed, and it would have a startling effect: vague meanings, and oratorical phrases would have to be cut out. A child could find them out.

I propose the printing (duplicating, writing) of congress proposals, proceedings, lectures, abstracts of lectures, reports and discussions in semantography with the words in English, and (wherever it can be afforded) with the French and Spanish words too, beneath the symbols. This would enable the great majority of science workers to read such sheets, and in the same time, would enable all science workers of other languages to participate in international co-operation in any field, not only in science, but also in industry, commerce, traffic, education, religion, etc., etc.

A small department at the university, chamber of manufacturers, chamber of commerce or at a government office could make the actual translating in symbols and language.

I propose English as the first language to be printed beneath each symbol, not only because of the vast literature and the vast research going on in English speaking countries, but also because English is the most simplified, the most analytical language, very similar to Chinese. Most languages are inflected languages, in which the "natural order" of an action: Agent acts on object is disregarded. In inflected languages, the name of the agent is added behind the action term: worki, workyou, workhe, not I work, you work, he works. English is most suitable for a symbol writing.

But, of course, the universities are free to add their native language, beneath the symbols. A little awkwardness of expression would mean nothing against the great advantage of having the symbol, the English word and the native word underneath each other. This procedure would acquaint the reader with the meaning of the symbol and the equivalent words in other languages.

The reader, interested in this matter, is asked, kindly to peruse the chapters in the first book. There the practicability of the whole scheme is explained at length (p. 65ff).

THAT TRICKY WORD "IS"

"I began my experiments with the word 'is' - putting the following set of sentences before my audience and the appended request:

- (1) Barkis is willin(g).
- (2) The Emperor is captured.
- (3) A bacillus is a vegetable.
- (4) To obey is better than sacrifice.
- (5) To doubt is to think.
- (6) She's a duck!

Please distinguish between the uses of 'IS' in the above...

I pointed out that we do all use the word 'IS' with incredible adroitness, but that our theoretical understanding of how we do so lags far behind... The experiment, I said, would not reveal anything new or startling or disconcerting. Still less would it suggest that we should change the ways in which we ordinarily use 'IS'. On the other hand, it might draw attention to some risks we run of misunderstanding one another through the trickiness of the word; and it might shake our bad habit of treating most things we read or hear as though of course we knew what they meant and, conversely, of writing as though no one but a fool could possibly mistake our meaning."

I. A. Richards (83)

It should seem strange, that we are attacking that most important verb "to be" only now at the end of this book. We know that this verb plays a tremendous rôle in the every-day language of all nations. Yet, we shall see soon ^{being} that it plays all sorts of tricks, and philosophers and logicians have accused it of the great mischiefmaker in speech, writing and thought. Alfred Korzybski, the author of "Science and Sanity" (56), the book on General Semantics, goes even so far as

to accuse this little word 'IS' as being responsible for most of the confusion and troubles of our modern world. He accuses Aristotle of having started

TO LIVE, TO BE, AND "TO BE" WHATEVER THAT MAY MEAN

the confusion (in the evaluation of my mind: Aristotle is not to be blamed for this) and he builds up a new Non-Aristotelian system on the condemnation of the 'IS'. One of his most important postulate is the somewhat startling axiom:




"Whatever you say: it is - it isn't!"

We shall deal with Korzybski's General Semantics in the third book. However, the above quotations may have convinced the reader that scientists have already recognized the pitfalls of this little word - but apparently, the "man in the street" hasn't yet.

Considering the disastrous results of nation-wide and world-wide propaganda, it may be high time, that the average man and woman, boy and girl recognize the tricks which this little verb can play in our lives.

It is not the word 'IS' alone which creates the confusion. All grammatical modifications of the verb to be must be taken into consideration: I am, you are, he, she, it is, etc. not only the present tense, but also past and future tense: it was, it will be, etc. etc.

The verb to be indicates the most important action of man, animal and plant: to exist, to live. Although we are utterly ignorant about this perpetual miracle in the universe, this duplication of matter with a mysterious purpose, we have given it a name LIFE. Similarly we have evolved a simple semantography symbol for this meaning.

				
sun spender of life	I individual	Life Existence	to be to live, to exist	living Being (man to microbe)

The biologist will certify that to live, to exist means a lot of ACTIONS. But the chemist may claim that these verbs, or at least the verb to exist are applicable also to inanimate matter, a stone for instance. Nobody doubts, that a stone exists. We are only doubtful, whether the verb to exist represents a physical ACTION. The physicist assures us, that this is so, whether we think that a stone consists of circling electrons, or of surging wave fronts.





For practical purposes, we have made this classification: animated matter and inanimate matter. A living cell can duplicate and create another cell, a stone cannot. However, we must be aware that there is no sharp distinction. Even if we discount G.B. Shaw's conclusion (quoted on page 125) that "if a dissolved salt can crystallize itself into a solid stone, it is as much alive as the nearest squalling baby", we have a feeling that somehow Shaw is right, and Biologists can point out many "creatures" which should also belong to the realm of the minerals. We have invented a symbol for the meaning of Life without bothering to explain it (because we can't explain it). Similarly, we have drawn a symbol for the meaning of Fire, without bothering to explain this mysterious happening. The chemist will say, it is an ACTION, resulting in the addition of oxygen to other elements. But the biologist Wilhelm Boelsche points out that a flame must be considered a living creature. Just think, a flame exists only by consuming fuel, which it digests chemically in the same way, as we digest our fuel, principally by oxidation. A flame has a "mouth" where the fuel is taken in, and a "rectum" where the digested products are ejected. Having no food, a flame dies (p. 596).

However, for practical purposes in speaking and writing, we shall distinguish between the verbs to live (for animated matter) and just to be and to exist for inanimate matter. We can do this, by minimizing our symbol for to live.





	
to be to live, to exist	to be (smaller sense)

We shall soon see, that we may use our smaller symbol even for living beings, if we want to indicate to be in a smaller sense.





When we want to say: Man is on earth, we shall employ the big symbol. When we say: Stone is on table, we shall employ the small symbol. But when we say in every-day speech: The man is in the room, it would be inconvenient to indicate: Man lives (exists) in the room. We may find it more convenient to use the verb to be in the smaller sense: Man is in room. We shall now write these sentences in semantography symbols.

 Man lives(is) on earth .

 Stone is on table .

 Man is in room

If however, we want to refer to the life of a hermit or prisoner who lives in a room all the time, we should employ the big life symbol.







However, the small symbol for to be needs some augmentation in order to cope with our every-day speech. It is clear, that the meaning of to be, indicates real existence. If we say: The stone is on the table or The man is in the room, we mean to indicate a real occurrence, a real happening, a real event, in short a fact. But are we sure about it?

When we are present at the table or in the room, when we see the stone and the man with our own eyes, and contemplate this vision in our brain, we are able to state a real fact. But usually we are not present at the real occurrence.

Very often we answer a question: "Where is the man?" We say "He is in the room."







But we may be mistaken. He may be gone already. The stone, which we saw a few minutes ago, may not be there, at the time we are asked about it. We think only, it IS there.

So we must combine the symbol for IS with the symbol for the mind.







 is, be is, be
 in a human mind Man is (I think) in the room.

In putting the mind symbol into the sentence, we indicate that the meaning of 'IS' may differ in different ^{minds}. This should make us less sure in our utterances. We may even go further and add the symbol for doubt, the question mark.


 or
 
 ?)
 
 .v
 
 .V
 
 .V
 

 may be may be may have been possible possibility possibility
 might be might be) past, p.191 (can happen, see p.246) (stress on mind)

We may now evolve the symbol for a happening, an occurrence, an event in space and time.



 or
 




 place event happening real reality a fact
 on earth, space occurrence event, occurrence (adjective) (adj. noun) a reality

This may seem disturbing. The meaning of real and reality should not indicate a human EVALUATION. Yet, these terms do not indicate a specific chemical THING, nor a specific physical ACTION. Consequently they must fall in the third group of human EVALUATION. And if we think just for a moment how and when we use these words, we shall be satisfied that they usually refer to an EVALUATION only. "I really believe!" "The real problem is..." "We must face reality". "It is a fact, that in russia as well as in the United States..."

We speak of realities and facts which we never observed, and which might well "exist" only in a human's mind. In most cases of our daily talk, the realities and facts which we "throw" in the face of our opponent - from where did we get them? From hearsay only. Even if we should be present at a car collision on a busy street corner, we are usually not sure about the facts, and about what really happened. Ten eye witnesses - ten different stories.

Only scientists, trained in the application of the scientific method of measuring and comparing, can reduce the human EVALUATION, so relative in meaning. The EVALUATION long or short disappears, once we apply a yardstick and measure. If different observers can repeat the measurements with similar results, then only may we tentatively speak about facts. But even then, all observations, and all measurements are made with our imperfect senses, and all conclusions arrived at are made with our imperfect brain. In writing our symbols, we should use the symbol of the mind, to indicate that variable system of reference, different from one person to the other, and we should use the question mark as often as we feel the slightest doubt, and even if we believe to be very sure.



to observe
(eye & mind)

to seem

to be

may be

a fact, event
a happening

a possible fact
event, happening

These symbols should act as safeguards against the use of the verb to be, as it is used nowadays. However, in the above paragraphs, we have treated the verb to be only in the sense to exist. Here we are on safest ground. But philosophers and logicians are concerned with quite different uses of the verb to be, uses which play havoc in human minds, and which have disastrous results in human affairs.

Let us follow Dr. Irving J. Lee of Northwestern University in his excellent book "Language Habits in Human Affairs" (84). He recognizes four "IS".

- (1) the forms of the auxiliary verb to be. Examples are "he is reading", "they have been fighting", etc.
- (2) as a synonym for existence. Examples are: "I am here", "There are ten people in the room", etc.
- (3) the "IS" of prediction, when the verb to be connects a noun and an adjective. Examples are: "the sergeant was heroic", "the music was beautiful", etc.
- (4) the "IS" of identity, when we use the verb to be to connect two nouns. Examples are: "Man is an animal", "Joe is a radical", etc.

Dr. Lee explains that the pitfalls are to be found with the "IS" of prediction and with the "IS" of identity and he explains in detail how we can recognize and avoid these. The reader is advised to read the book, which is one of the best on Semantics. A chapter in the third book contains ^{tations from} Dr. Lee and other semanticists, ^{so} Korzybski's theories about the "abstraction levels". After studying with a group of students, I have found that this theory is not readily grasped. Korzybski starts with the real object. We look at it with our senses - first abstraction. Then we open our mouth and say something, for instance: "a man" - second abstraction. Then we say "a biped" - third abstraction. Then we say: "a plumber" - fourth abstraction. Then "a rascal" - fifth abstraction. Then "a father" - sixth abstraction, and so on. Korzybski maintains that our trouble comes from the fact, that we confuse abstraction levels. We "identify" the first level "real object" with the fifth "rascal".

Other semanticists explain our troubles with other theories and all these theories have its merits. After studying them, and testing them, I have found that my symbols of chemical THINGS, physical ACTIONS and human EVALUATIONS are quite readily grasped by pupils. The reader, who has studied other books on semantics, may judge for himself.

We shall now use our symbols for the four "IS"

(1) Auxiliary verb.

The auxiliary verb to be is not used in semantography. Instead of saying "He is reading" we write in symbols "He reads". Instead of "They have been fighting", we write "They fought".

(2) Existence. The use of the verb to be for the meaning of existence has been explained at length in the preceding pages. We have seen, that even with the meaning of existence we must be wary, and we should use the additional symbol of the mind and the question mark.

(3) Prediction. If we change this term, and call this section "On the 'IS' of EVALUATION" the matter becomes simple for the student of semantography. We have to look for the terms which denote a chemical THING, or a physical ACTION or a human EVALUATION, and we know now, that the latter terms are those, which are relative, and vary in meaning in different minds.

Let us write a few sentences in ordinary writing with the indicators on top.

□ ^ ^	^ □	□ ^
Man is hammering	Hammering man	Man hammers
□ ^ ∨	∨ □	□ ∨
Man is bad	Bad man	Man, bad

It is clear, that the word hammering denotes only a physical ACTION, whereas the word bad denotes a human EVALUATION, vague in meaning and different with different persons. If we write these sentences in our symbols, we see that the little word "is" serves only as a connecting word.

□ ^	□ ^
⋈ ⊕ ⋈	⋈ ⋈
Man is hammering	Man hammers

No vague meaning is found in these sentences. However in the following sentences we have not a physical ACTION symbolized, but a human EVALUATION.

∨	∨
⋈ ⊕ ⋈	⋈ ⋈
Man is bad	Bad man (or) Man, bad (rascal, rogue, villain)
	Man (evaluated) bad (p.206)

We see now why philosophers and logicians have attacked the little "is" as mischief-maker in all languages. People recognize that "is" means real existence. When somebody said: "This man is bad", the "is" made people believe that that man is really bad.

However, if we write the sentence in our symbols, we see that the little "is" is only a "messenger boy", a connector or "copula" as the philosophical term runs, a word which "couples" only. The mischiefmaker is not the "is", but the human EVALUATION, which stands "demasked" when written in our symbols.

The symbol for bad shows the variable system of reference, a human mind (in particular the Superego, the part of the human mind, containing the conscience (see p.178, 205 ff)

However, other adjectives for instance hot or vertical do not carry a symbol indicating a human sense (although in the case of hot we could add the symbol for touch, the hand). But these adjectives carry the EVALUATION symbol ∨. Here again the mischiefmaker is not the coupling "is", but the human EVALUATION clearly marked with the symbol.

In "colloquial" writing however, we can dispense with the indicators, as explained in foregoing chapters. A writer, very familiar with the symbols, can dispense with the indicators for THING, ACTION and EVALUATION. Then other people would not readily see the EVALUATION in the sentence. How can we dispense with the indicator and still warn the reader?

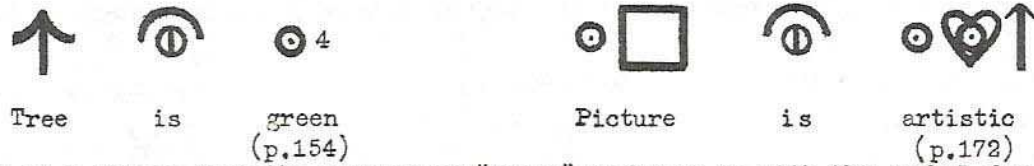
We may employ the same safeguard as with the meaning for existence. We put a mind symbol on top of the to be symbol.

~	⊕	{>}	⊕	⊥
Water	is	hot	House	is vertical

These utterances written this way, show clearly the mind of the person who uttered them. In his mind the water is hot, and the house vertical, but another mind may make a quite different EVALUATION. It might be a difference in degrees only, of course.

This symbol for "is" consisting of the symbols for is and mind is to be preferred. We should write this symbol for any tense form of the verb to be (am, are, was, were, etc.)

Dr. Lee follows Korzybski in explaining that the meaning of "green" and "green-ness" is not something, which is in the tree. "Green" itself has no real existence. It is the product of a relation between observer and what is observed. It refers to a sense reaction within our skin. We can see this at a glance, if we write it down in our symbols.



We see at a glance, that the meaning of "green" is bound up with the symbol for eye, vision. It is meaningless for a blind man, and open to argument for a partially colour-blind person. We do not even need the mind symbol in "is" to recognize a sense reaction variable in meaning in different eyes and brains.

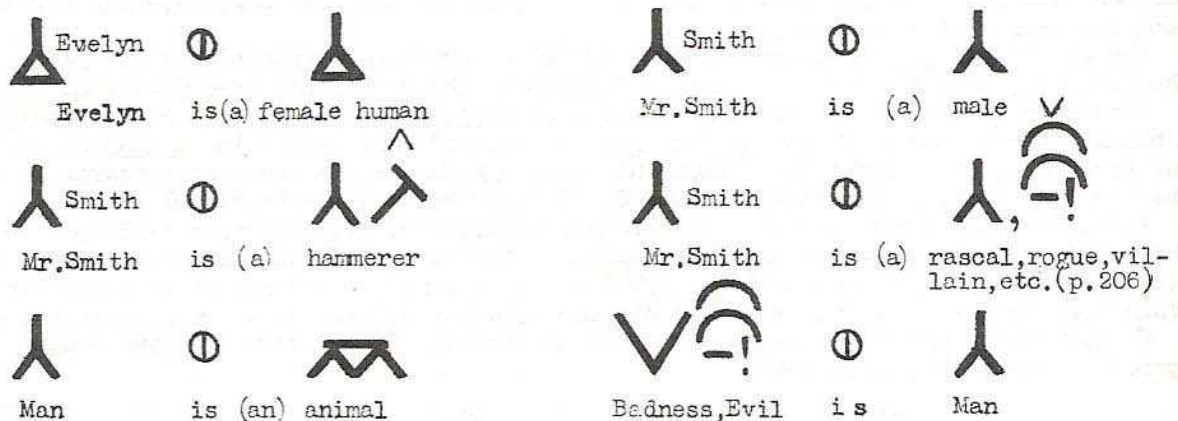
However, we have learned how to overcome human EVALUATIONS: we measure with yardsticks. The meaning of hot is cleared when stated in Celsius degrees. Accurate instruments may detect deviations from the vertical line of the walls of a house, and even a colour-blind man could operate a spectrographic camera and obtain spectroscopic lines, equally valid for different observers.

But how about the sentence: "This picture is artistic". The great masters of old have evolved geometrical rules, and have measured relations in a beautiful face and in a beautiful body. Nevertheless, arguments are "white-hot" in the arena of arts, as to "what is artistic and what is not." Look at the symbols in the above sentence. You find there 6 variables: 3 times the eye, 2 times the mind (Id and Ego) and 1 times the arrow indicating up, a space relation, relative, as any space relation. No wonder, that people cannot agree about the meaning of an "artistic picture". The only "innocent" symbol, apart from the picture enclosure symbol is the symbol for the little "is" . It indicates that there exists something about which human minds and eyes are at variance in their EVALUATION.

The culprits are ^{and our mind} our senses. The "is" serves only as a kind of messenger boy, as the "copula". Don't blame it for the mischief done.

(4) Identity. The worst accusation, which Korzybski throws against the little "is", lies in the assertion, that the "IS of Identity" confuses levels of abstractions, etc.

Here again our symbols, and our indicators will soon help us to find the "culprits". Let us write down a few sentences in our symbols, but let us omit the safeguard of the mind symbol in the symbol for "is".



Well, where is the mischiefmaker? Is it the little copula, or is it the EVALUATION which we make with our senses, especially with our brain? All the above sentences contain the accursed "Is of Identity". In all sentences we do "identify" something with something else, yet some of these sentences will not cause any mischief.

Of course, as long as people believe that Badness, Evil, Green, Art, etc. etc. are "substantives" being a "thing" with a substance, then the mischief will be done whether we employ the "is" (man is bad) or not (bad man).

There is another advantage in our symbols. In the first sentences we have the symbol for man (male human) on both sides of the equation.

In the last sentence "Badness is Man" we see at a glance, that a human EVALUATION can't be a chemical THING. However, in the sentence "Man is an animal" we have chemical THINGS on both sides of the equation.

Here however we must remember that we have chosen our symbols from the standpoint of the chemist, physicist and biologist. We have chosen symbols for the biological entities in our world, and have agreed that the unique entity Man should be indicated by a special symbol and the quadrupeds, including the apes, by another symbol. Consequently we can't mix up the entities man and animal. Should we find the missing link, the entity between man and ape, we would have to invent a new symbol. These symbols are invented for practical purposes. Biologists may come to an agreement about entities on the border between animal and plant, or plant and mineral. We shall choose our symbols accordingly, and amend them if new research should make this necessary. But for all practical purposes: "Man is not an animal", and those people, who use such expressions, should better state clearly what they mean, namely "Man is stupid", "Man is voracious", etc. These words mean human EVALUATIONS all right. But even if a speaker makes an abstraction from the meaning of animal, beast, and says "Man is animalistic", "Man is beastly" he must put the EVALUATION indicator on top of the symbol for animal - but he cannot write in semantography "Man is an animal"

Seen from this point of view, the sentence in semantography resembles somehow a mathematical equation, and to show this even more clearly, we may for the following line insert the mathematical symbols for equal = .

$$2 = 4$$

Two is Four
equals

Man is Animal
equals

(standing alone)

We should not use this mathematical symbol for anything but mathematical equations. Yet, we may contemplate about the influence of the "is" in mathematics and its influence on our speech and thought. Take the Germans for instance. The whole German nation went through primary school education and learned about mathematical equations. Consequently it is impossible to put over a very big lie on them, for instance "Two is Four". According to Hitler's recipe "Repeat a big lie over and over again until the people will believe it" the Germans might have believed that "Two is Four". But we know, that they would not, because they learned mathematics in school. But they did not learn semantics, and did not know about the tricks to which the little "is" could be misused. Consequently the great majority of them swallowed the statement

Hitler is Germany

and

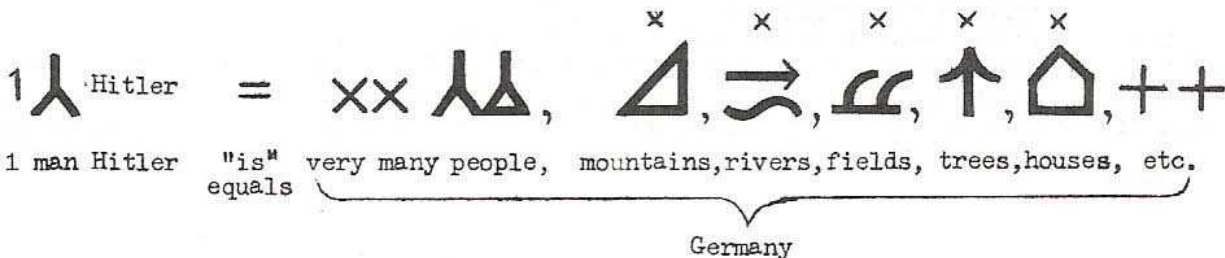
Germany is Hitler

and the result was the destruction and misery which they brought about other nations and in the end about themselves.

Stuart Chase, author of the recommendable book on Semantics "The Tyranny of Words" (26) said:

"Indeed it is doubtful if a people learned in semantics would tolerate any sort of supreme political dictator. Ukases would be met with a flat "No compredo" or with roars of laughter. A typical speech by an aspiring Hitler would be translated into its intrinsic meaning, if any. Abstract words and phrases without discoverable reference would register a semantic blank, noises without meaning."

If semantography would be taught to children in all countries, just as $1 + 2 = 3$ is taught now, such confusion, to-day caused by propoganda, might be prevented. Children can draw the outline of things. They would readily grasp the nonsense contained in a drawing



Can we abandon the use of the "is" in all languages. This seems impossible. We use it in almost every sentence. Dr. Lee and Korzybski recommend the use of some additional words. For the "Is of Prediction" they recommend the phrase: "it appears to me". Instead of "The tree is green", we should say "The tree appears to me green. Undoubtedly, this would have a good semantic effect. "He appears to me bad", instead of "He is bad".

To avoid the "Is of Identity" Korzybski recommends the saying "Mr. Smith may be verbally classified a man." "Mr. Smith may be verbally classified a hammerer". However, this procedure does not solve the problem, the recognition of the human EVALUATION. It leads to statements as "Mr. Smith may be verbally classified a rascal!" "Man may be verbally classified an animal".

Now we must understand Korzybski. He wants to indicate that whatever we say about a real object are only words, not the object itself. Korzybski's axiom: "The word is not the thing" baffles simple people. They retort that they are well aware that the word "mother" is not their real mother. So we must take into consideration the different abstraction levels in the theory of Korzybski (see p. 408). On the first level is the real object, which we cannot define with words. Korzybski calls it the Event, the submicroscopic processes which are going on within the atoms and molecules. This is the "silent, unspeakable" level. At this stage we can only point at the object. As soon as we open our mouth and say something about the object, we are already on the verbal level. John is not a man, but something about which we can only be silent. This idea has been formulated by Korzybski into an axiom, which runs:

"Whatever you say it is - it isn't!"

From this point of view, Korzybski attacks even the "IS of Existence". But once we get the idea of Korzybski, what can we gain in the improvement of our speaking habits? We cannot abandon the use of the "is". It is one of the most important verbs in any language, perhaps the most important. It plays a ghostlike existence, even in the phrase: "John may be verbally classified a man."

I had some practical experience with a class of students, studying Korzybski's book "Science and Sanity". Much of it was of great value to the students, however the axiom "Whatever you say it is - it isn't" made them quite bewildered. To understand this, let us imagine a man, who never heard of Korzybski, but hearing the word, assumes that it is Polish. He might ask: "Tell me, what is this Korzybski? Is it the name of a Polish town, is it a mountain or a lake in Poland or is it a Polish delicacy?" What shall we answer? The simple answer would be: "Korzybski is a man, he is a writer, he is a citizen of the United States, he is the author of the book "Science and Sanity".

But according to Korzybski's axiom "Whatever you say it is - it isn't", we must come to the conclusion: "Korzybski is not a man, he is not a writer, he is not a citizen, he is not the author of the book. "Well, what then is Korzybski really? He is, well, a submicroscopic process, no, he is not even this (because these are words) he is..... (Silence).

Here may be found one of the reasons, why General Semantics has been rejected by many people. They understand what Korzybski wants to impress "The word is not the thing", but they ask "Where do we go from here?" They want a practical advice to improve their technique of speech, but they refuse to say: "This... (pointing with the finger), this... what we may verbally classify Mr. Smith is... what we may verbally classify sitting, at... what we may verbally classify a table", and so on. When they find that Korzybski uses the "Is of Prediction" and even the "Is of Identity" in almost every page of his book, the whole theory becomes discredited in their eyes.

What practical advice have other writers to offer?

I. A. Richards, the co-author (with C. K. Ogden) of the standard work on semantics "The Meaning of Meaning" (17) said in his "Interpretation of Teaching" (83) (see the quotation at the beginning of this chapter):

"Still less would it suggest that we should change the ways in which we ordinarily use 'IS'. On the other hand, it might draw attention to some risks of misunderstanding one another through the trickiness of the word".

Lee said in his book "Language Habits in Human Affairs" (84):

"All important in any event, is not the mere elimination of the noun-is form from our speaking and writing habits. More important is the development of the consciousness that this "is" breeds false-to-fact evaluation. If that consciousness becomes a part of our daily living, a host of confusions will be on the way to dissolution even, if we keep on using the "is"."

BOOK III

THE SEMANTICS OF SEMANTOGRAPHY

HIGHBROW LANGUAGE

"He that will write well in any tongue, must follow this counsel of Aristotle, to speak as the common people do, to think as wise men do, and so should every man understand him, and the judgement of wise men allow him."

Roger Ascham (1515 - 1568)

"When Mr. A. D. Sheffield was addressing an audience of working men, a voice exclaimed, 'Say Prof! Your sentences skid off our domes!'"

I. A. Richards (85)

"A perfect example of the kind of bad language used by the writers of textbooks of economics: 'For the administration in a private profit making corporation the criterion of success is primarily that type of decision and action in the manipulation of resources which results generally in maximising for the corporation the net revenues quantitatively measurable.' This is bad language. Translated into English, all it means or says is, that private enterprise measures success by the profit made."

From the National Security Regulation: "...an industrial authority shall, if after a preliminary hearing or examination of the matter the authority is of the opinion that the grounds on which the alteration is sought provide prima facie evidence that an alteration is necessary to remove an anomaly, to compensate for a change of circumstances in the employment, to adjust marginal rates which appear to that authority to require adjustment having regard to the marginal rates in other occupations, or to adjust...." I really can't go on quoting bad language.

"Bad language I define as language which is obscure where it might be clear, which uses two words where one would do, and which uses new words where old ones are ready to hand."

Walter Murdoch (21)

I should not add anything to the quotations above. We are all familiar with such kind of writing and speaking, and we are here only concerned with its effects on semantography. Is this urge to speak and write in a complicated manner, only confined to a few minds, or are we all afflicted with it? Is it only vanity, the desire to show off, to pose as learned and educated, or is it a subconscious effort to overcome our inferiority feeling, the realization of our ignorance, which we want to cover up? Or is it the age-old urge of man to organize society in classes with inferior and superior individuals, divided by wealth and custom, by talk and understanding?

Sometimes, such "verbiage" is called "highbrow" speech. There are certain intellectuals who delight in it. By using such language, they feel themselves elated above the ordinary crowd, who marvel at their sentences. For such "Highbrows", meaning, expressed in simple words, is of little importance. Above all is the verbal expression, no matter how much confusing. And we find this kind of "officialese" almost anywhere, not only in the offices of the government and justice, but also in science and business.

We are here not concerned with literature and poetry, where anything is permitted. We are concerned with those speeches and writings which we encounter daily in our work. If we should make a success of organising co-operation and peace on this planet of ours, we must understand each other. We must use simple language.

If semantography should become a practical tool for bridging the language barrier, simple language is a necessity. We must adhere to the simplest sentence Agent - acts on - Object, and we must break up any long sentence in such short sentence units. Otherwise semantography may be a failure, caused by our desire to complicate ordinary language.

I have thought a lot about the question, why Esperanto and other auxiliary languages have proved a failure. I believe I found the reason in the irresistible force of the mother tongue and the failure of the human mind to acquire a foreign language (by studying a few hours each week) when all the other time only the mother tongue is used. But there is another factor, which accounts for the failure of Esperanto.

This is what I have witnessed in the Esperanto movement. The richness of grammatical expression in Esperanto, allows for even more subtle shades of meaning than in English. Most advocates of Esperanto give high praise to this advantage of Esperanto, and the many poems in Esperanto prove that Esperantists have made good use of this richness of expression.

Now take a look at a group of people intent on learn^{ing} Esperanto. They are all Idealists, but in regard to their vocation and education they are very different. Some are professors, some engineers, some students, and some workers, whose education has not gone further than the primary school, and who make a tremendous effort to listen, to speak and study after a tiresome working day.

Soon, a few in this group will take the lead. Their exercises will be the best, their speeches will be lauded by the teacher. In their desire to excel before the others in the group, they will soon write complicated sentences, they will use many synonyms and they will feel elated about their success.


However, those simple people who joined the Esperanto movement will stand in bewilderment before those grammatical and literary acrobats. They couldn't understand it, even if it had been written in their mother tongue. The result is a feeling of inferiority, of frustration and a withdrawal. Esperanto, which was supposed to become the language of all the people, remained the exclusive domain of a group of enthusiasts, who are very apt in grammar and writing. There is the fact, that Esperantists of different countries and languages face misunderstanding, because they use the Esperanto words in rich and complicated sentences, built according to their own mother tongue. Jespersen stated, that he had sometimes to translate an Esperanto text in the mother tongue of the writer in order to understand it. He wouldn't have to do this with simple sentences.

My first disciple in semantography astonished me by his delight in composing complicated sentences in semantography. He wanted to show, how apt he is already in writing.

To understand complicated sentences, you must dissect them slowly. You must know a lot of grammar. Unfortunately sentences are constructed differently in different languages. With monstrous sentence clusters, communication is either blocked or leads to misunderstanding - in any language. In semantography it would lead to disaster.





I realized that enthusiasts with a desire to show off in semantography, could kill the whole idea more effectively than all the ridicule of the whole world could do.

All those people who want to join this pioneer work, must be acutely aware of this danger. They must repress in themselves that urge - to write "highbrow".

The great advantage in semantography are the safety devices, which indicate words, of which different minds could have a different opinion. These safety symbols are the symbols for human EVALUATION, especially the symbols of the human senses and foremost the symbols for the human mind. The symbol for speech  (mouth) indicates an organ, which is acting through the central station, the brain, and we add the symbol for the brain sometimes, if we want to lay more stress on this direct connection. We shall now evolve a few symbol combinations which should act as added safety devices.

One of the dangers to understanding is the habit of generalisation. Once we discover some similarity in different things, we give them a general name, which in consequence makes us believe, that all those different things are alike. A man born in Asia, is a human being, but when we use a general term for all humans born in Asia, and call them Asiatics we are on very dangerous ground. The British, the Russians, the Americans, the Jews, we know how much confusion such generalisation creates. We do not become aware, that the words Brit-ish, Russ-ian, etc. represent actually adjectives, and must be recognized as abstractions, as human evaluations, which we attribute to a great multitude of people, who are all different from one another.

Our symbol for generalisation should express a saying about a multitude.

			
a saying speech (mouth)	many, multitude (multiplic. mark)	symbol for generalisation <u>a saying about a multitude</u>	to generalize (mind symbol is added to lay stress on it)

This new compound symbol should indicate a prototype term, a word representing a multitude of things - and we should keep in mind that not two things are alike in the world.

			
water	liquid	spring (sun)	season



man (male)



person (male)



individual (any sex)



person (any sex)



addition



gain



subtraction



loss

There are words in one language which are missing in another. For instance, our meaning for "they" does not indicate whether "they" are males, or females, or mixed; whereas our words for "he" and "she" indicate the sex clearly. However "it" may mean male, female or things sexless. Similarly our word "person" does not indicate the sex. In other languages, there might be words, which indicate either male or female "persons". We may suppose a language which has no word for "liquid" or other general terms. If a reader of such a language, sees the generalising symbol before the symbol for water, he may assume (according to the grammar rules of semantography) that the writer wanted to indicate a general term for THINGS "similar to water". In any case, the symbol (mouth and mult. mark) would indicate the vagueness of the similarity, and will put the reader on his guard. Beware, a generalisation!

Gain and loss are general terms. If we want to depict an emotional or rational gain or loss, a feeling, or thought in our head, we would have to add the mind symbols. However, the mouth symbol in itself indicates the relative meaning of ^{the} term sufficiently. The vagueness of meaning is even more pronounced, when we generalize an adjective term.



near



nearness



environment
(in general)



sick



sickness
disease

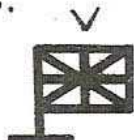


disease
(in general)

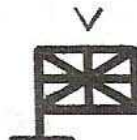
Nearness and environment are terms vague in meaning. So are the terms sickness and disease, when we think of the many imaginary maladies, imagined by the patient and the doctor. We can avoid such general terms, by making definite statements as to certain chemical THINGS and physical ACTIONS.



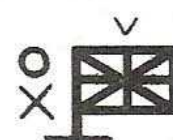
Great Britain



British



a British motorcar



British

We know that British motorcars are among the worlds finest and we know of the great achievements of the people of Great Britain on every field, but just think of the hostile minds who make all kinds of abstractions and evaluations when they open their mouth to say "British". Our new generalisation symbol should make us aware of the utter vagueness of such terms as British, American, and other sweeping terms. We better write



a motorcar



made



in



Great Britain



a man



from



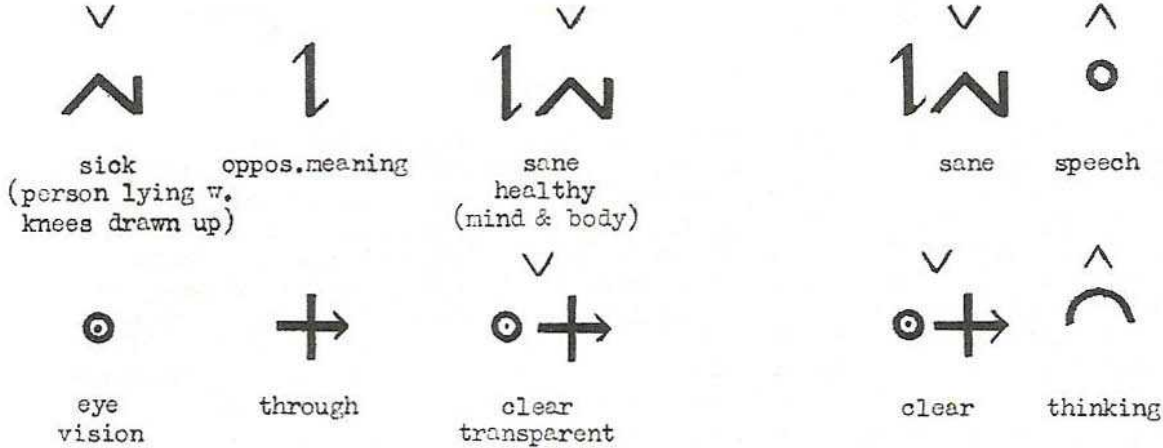
the United States

No evaluations and abstractions and no generalisations are to be found in these statements which are reduced to real THINGS, cars, men and territories. Even, if we should never write in symbols, such demonstrations, based on the system of semantography, when taught in school, may help to make better citizens, saner speech, and clearer thinking.

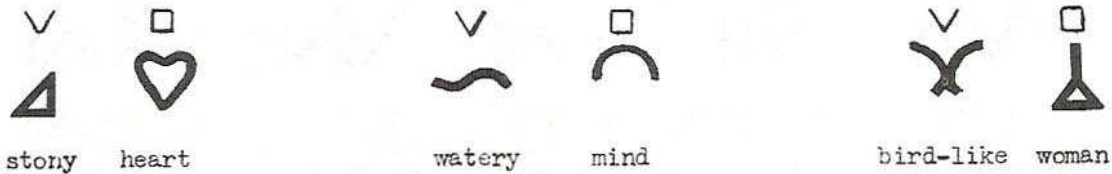
(418)

The last words in the foregoing paragraph "sane speech" and "clearer thinking" contain a so-called metaphor, which is the Greek word for transfer. I have transferred the medical meaning of "sane" to the meaning of "speech", and the chemical meaning of "clear" (a clear substance, which let light pass without distortion) to the meaning of "thought"

In semantography the metaphor, a transfer made within a mind and not to be found in nature becomes visible through the geometrical symbols.

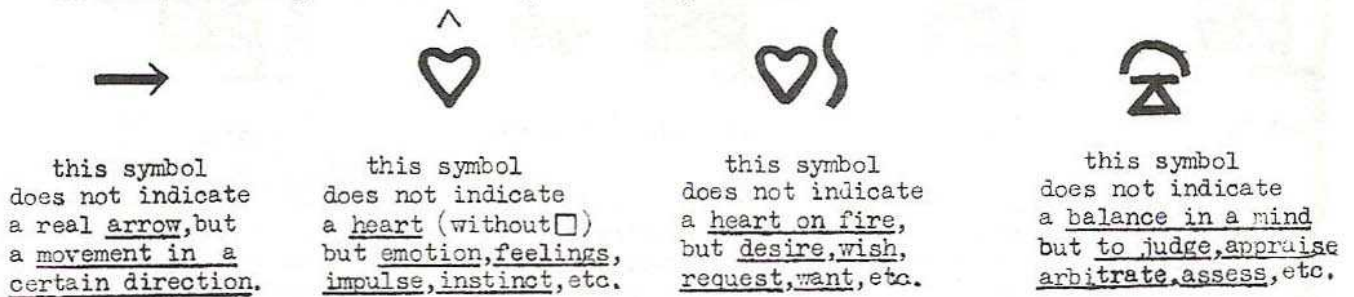


Let us suppose a person in whose mother tongue these metaphors "sane speech" and "clear thinking" do not exist. Nevertheless, he would have no difficulty to recognize the EVALUATION of the writer, who made some abstractions of the meaning of "sane" and "clear" and added them to completely different meanings. Here are other examples.

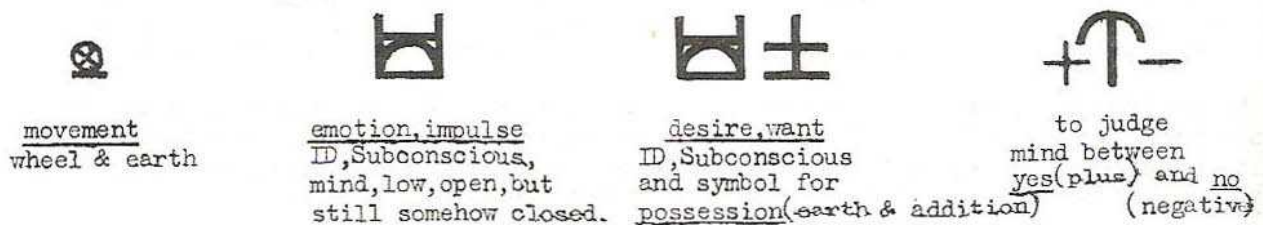


The EVALUATION indicator marks the abstraction, vague in meaning, and different in meaning for different persons. Thus a metaphor becomes "clearly" visible in our symbols.

However, if we look over our symbols, we will find, that some of them are metaphors in themselves. They contain a metaphorical expression.



I have chosen these symbols, because they are age-old, and well known in any language. Of course, we can alter them, but we would have to use another metaphor, because we attempt to outline something, which cannot be outlined directly, because it has no outline. Instead of the symbols above, we have chosen others or may develop others:



But these new symbols represent again metaphors. We may use the wheel to indicate a movement, even if no wheel is involved. The symbolization of the Subconscious uses an open box, with a lid somewhat down below. The symbol for possession indicates the earth from where all things come. We see, we can't escape the metaphor for such meanings.

However, our aim is to fix symbols for concrete meanings. We must realize, that we cannot outline meanings, which have no outline; we must make some abstraction in our mind, we must use some analogy, simile, in short some metaphor.

But we must face the consequences of our doing. A metaphor is a transfer, made in our mind, something we cannot perform in the real world. Consequently the meaning depicted would be vague, and relative for different minds. This vagueness of meaning is, however, already clearly indicated by the symbol of a human sense, be it an eye, a heart or a mind. If we add a metaphorical symbol to a meaning, which is already relative, no damage is done. The meaning is relative already by introducing such symbols.

This refers even to the arrow. Any direction in space, is relative anyway. The arrow standing alone may mean forward, progress for one person, and backward, regress for another. From this point of view, the use of metaphorical symbols makes us wary at the out^{set}. We have drawn up a list of symbols and we know which symbols indicate a relative meaning. Moreover the context would make it clear, if we should be in doubt.

A few weeks ago, a newly published book came to my knowledge. WORDS IN ACTION. The Teaching of the Mother-tongue for the Training of Citizen in a Democracy, by Sir Philip Hartog. (85). I read it with great delight, and I was overjoyed when I discovered that Sir Philip Hartog is a chemist by profession. All the last six years of my work on semantography, the disheartening thought did not leave me, that professional linguists will tell me to go back to my retorts and test-tubes and leave language alone. Now I read what Sir Philip Hartog has to say:

"I say, unhesitatingly, that the application of the principles which I advocate is of fundamental, national importance, and that I believe that it can be achieved by the method which I shall describe. It is not in the spirit of a Paracelsus that I speak, but in that of a modern chemist who states without apology that he has discovered a new method of synthesis or analysis.

In regard to the method that I shall describe in this book as the safeguard of a nation against the infection of unsound propaganda, as a means of making each child realize that he is being brought up not as a member of a crowd, but as an independent, thinking and active member of a community of free people."

I feel sure, that Sir Philip will recognize my work as another step to the aim mentioned above, and I feel equally sure, that he - a chemist - will be greatly interested in my word formulae, so similar to chemical formulae.

Sir Philip has a lot to say about semantics (see quotation in a later chapter) and he devotes much space to the metaphor. He cites Samuel Butler, who said in an address about Thought and Language, given in 1890:

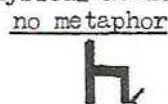
"Everything we say is metaphorical, if we choose to be captious. Scratch the simplest expression, and you will find the metaphor."

Sir Philip explains the various metaphors; its simplest form (tree leaf and paper leaf), the first term (head of an animal) and the second term (head of a class): a live metaphor (the arm of the police) and a dead metaphor (the arm of a chair), because we don't think of a real arm by referring to a chair; an explicit metaphor, (something which we take from real nature, as the leaf of a book, compared with the leaf of a tree, both light and flat pieces of matter) and an implicit metaphor (the elms were nodding in the breeze; an abstraction which we make implicitly in our mind), and he describes other types of metaphors. The reader is strongly advised to read the book.

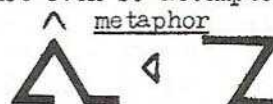
We have shown in foregoing examples, how metaphorical expressions become visible in semantography. I maintain, that a writer would become too painfully aware of the awful abstraction, which he makes in depicting a stony heart, a watery mind or a birdlike or piggish person, that he would stop drawing such nonsense. And if he would not, those who would read his writing would denounce it as nonsense, as so vague in meaning, as to be meaningless. Metaphorical expressions, wholly composed of symbols for concrete meanings of chemical THINGS and physical ACTIONS would not even be attempted, as for instance:



leg of a chair
(human)



leg
of chair



going by air
(sky & nose)



using a
flying machine

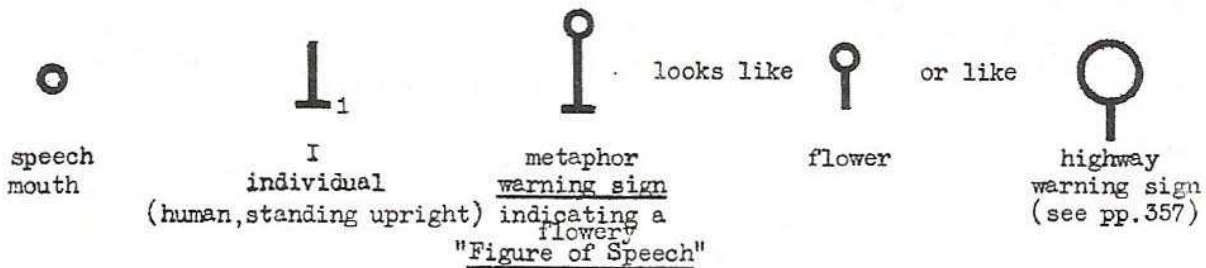
Sir Philip cites a famous semanticist, of whom we are going to hear more in the third book, John Locke who lived from 1632 to 1704 and whose Essays on Human Understanding will surely play an important part in the future study of semantics. Locke wrote

"Seventhly, figurative language also an abuse of language.

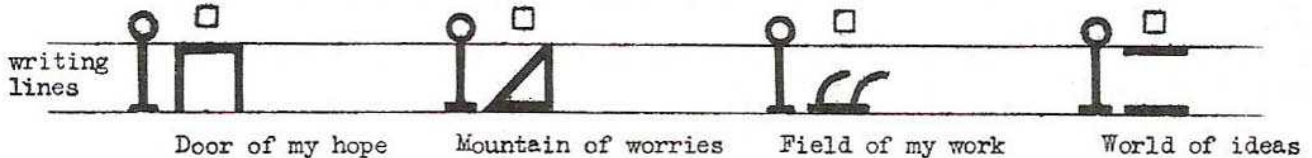
"Since wit and fancy finds easier entertainment in the world than dry truth and knowledge, figurative speeches and allusion in language will hardly be admitted as an imperfection or abuse of it. I confess, in discourse where we seek rather pleasure and delight than information and improvement, such ornaments as are borrowed from them can scarce pass for faults. But yet, if we would speak of things as they are, we must allow that all the art of rhetoric, besides order and clearness, all the artificial and figurative application of words eloquence hath invented, are for nothing else but to insinuate wrong ideas, move the passions, and thereby mislead the judgement, and so, indeed, are perfect cheats."

Just imagine, that in Locke's time, there were no newspapers, no mass meetings, no political election campaigns and no nation-wide radio broadcasts.

Although metaphorical expressions, written in semantography, would be clearly marked by the EVALUATION indicator or a sense symbol - or would reveal itself as nonsense, by combining THINGS and ACTIONS in an "unnatural" way, we must evolve a special symbol for the meaning of metaphor to stand before such expressions as a warning sign. A metaphor may be found sometimes a useful instrument to convey a difficult meaning. But such expressions must be clearly marked as a "flowery" "figure of speech", as the expression of a "highbrow" individual, who keeps his mouth and speech on a "higher" level.



You notice that this "Highbrow figure of speech" extends above the top (sky) writing line. As it stands, it looks like a highway warning sign to warn us of metaphors, vague in meaning, of analogies, similes and the like, which originated only in a mind, and may well be meaningless, or contrary to the facts.



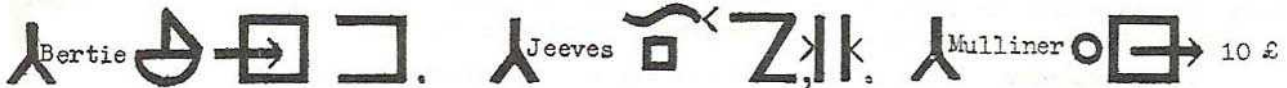
I have deliberately put the THING indicator on top of the symbols, to show that the writer used words and pictures of real chemical THINGS. For such expressions, the metaphor symbol serves as an appropriate warning sign.

This metaphor symbol may serve practical purposes. As said before, a metaphor is sometimes very useful to describe a certain state of affairs. However, in semantography, we have always to bear in mind, that we write lines, which should be readable in any and all languages. If one of the metaphorical expressions depicted above, is unusual in a language, is even non-sensical there, the reader would learn from the metaphor warning sign, that the writer has used an allegory, analogy, simile, in short a metaphor. The reader would try to guess the meaning in such cases, but would never lose sight of the fact, that he deals with a "figure of speech", vague in meaning.

Idiomatic figures of speech, which are non-sensical when verbally translated, may look just as non-sensical, when written in symbols, and so the writer would abandon their symbolization. Every language has such idiomatic expressions, which are a nightmare to the foreigner. We can easily depict: to "put down" a stone; but how would this line look: To "put up" a guest for the night. We have a nice symbol for mother-in-law (p. 282), but could we write in symbols: To "put up with" a mother-in-law, using the symbols for put & with.

Such expressions would exclude themselves from semantography. They seem all right for the native, who never gives a thought as to their actual literal meaning, but ask a student of foreign languages, and he will tell you, that they make translation impossible.

Of course, if a future P.G.Wodehouse would write in semantography, then anything is bound to happen



Bertie sailing into the room. Jeeves dissolving in thin air. Mr. Mulliner coughing up a tenner (10 £)

If a writer wants, at all costs, to include a proverbial expression in a writing in semantography, he may use the metaphor sign and put the expression in brackets.



The first expression is used literally in various languages. The second expression, however, is used differently. In German it is said: To hold a person 3 paces from your body.

In semantographic reports on science, industry, commerce, traffic, such expressions should not occur, except in harmless remarks. However, they would assume a quite different aspect in the translation of political speeches. In this field, semantography may take on a new meaning, and a new purpose with consequences of world-wide importance.

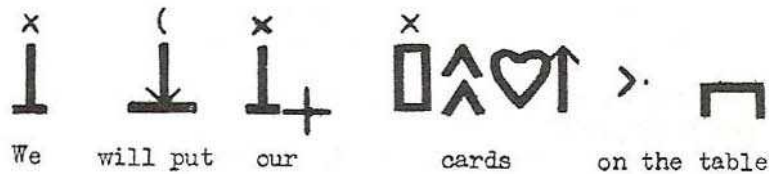
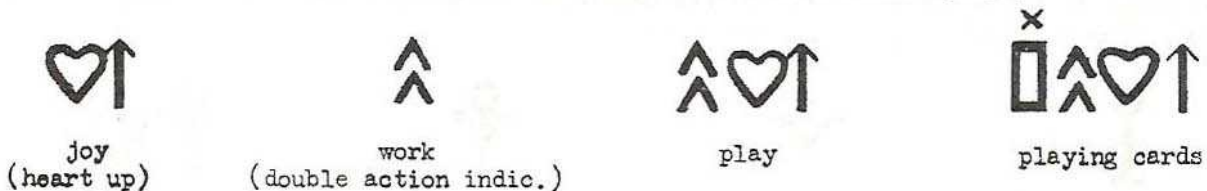
Almost every speech made by a politician contains metaphors, analogies, similes and other rhetorical devices which display a vagueness of meaning, horrifying to the semantologist. However, those sayings appear clear and correct to "the man in the street". He did not learn about semantics in school, and he takes all in as a revelation of truth.

A few weeks ago, Mr. Vishinski made a proposal for disarmament in the session of the Security Council and General Assembly of the United Nations in Paris. He did not declare:

"The Russian Government is ready to agree to an international commission which should go to Russia and to the other countries, invested with the necessary powers, and to see that the disarmament is carried into effect." This would be a practical proposal to be applied to all countries. Instead Mr. Vishinski said:

"We will put our cards on the table"

This looks sensible enough to the "man in the street". He knows that if you put your cards on the table, face up, anyone can see directly what they are. There is no fooling here. No doubt, this offer of Mr. Vishinski is sincere. He is ready to put his cards on the table. Well, let us translate this sentence into semantography.



Mr. Vishinski's words are intended for consumption by the "man in the street". The newspaper reader does not realize that the above phrase has a meaning when playing with cards, but it is a metaphorical expression, almost meaningless when applied to a practical proposal for disarmament. The men of politics refer very often to such expressions, which deal with the simple things of life, with which the "man in the street" is familiar. Mr. Bevin, for instance, referring to some political manoeuvre, used the following metaphorical expression: "You cannot put up the roof of a house, when you have not even made the foundations", and a French cabinet minister said recently: "You can't take away the air, otherwise people would be choked". They used the language of the engineer, although the matter in question had nothing to do with a house or with air. Talleyrand, the French diplomat, was quite frank about it, when he said: "Language is intended for the concealment of thought."

THE DIFFERENCE BETWEEN POLITICAL AND POETIC LANGUAGE

If you translate such political speeches into semantography, sense and nonsense is mixed, just as in the semantographic translation of Wodehouse's celebrated expressions. You don't know, should you laugh or cry, but crying would be more appropriate, considering that the peace and the lives of countless millions of people depend just on such sayings. Semantography could be helpful, in demasking other expressions, like

It is reported... Informed circles say... General opinion favours...

Just try to write these phrases down in semantography, according to the sentence unit: Agent-Acts on-Object or THING - ACTS on - THING, and find out, who is the mysterious "It" and who are the circles and who is General Opinion. There are straightforward correspondents, who refuse to canvass rumours and who start their reports with: "Mr. So and So said This and This." One day, in the near or distant future, writers trained in semantics will write for a future generation, trained too in semantics. One day.....but when?

However, there is a vast field, in which any metaphor is allowed, even appreciated: the realm of the poet, the writer of belles-lettres, the author of literature of an aesthetic value, of poetry, essays, drama. He may carry us away on the wings of our emotion, and he may use any metaphor, and any vague expression, and any word order, and he may even invent new words with emotional meaning. His creation is a kind of music, which reverberates in our soul, which makes us forget the dreariness of "making a living".

But even he, should not "overdo" it. Even he should use simple language. Somerset Maugham describes in his latest book "Catalina" a writer, not to his liking

"His style was rich in simile and metaphor, metonymy, synecdoche and catachresis.

He never let a noun go by without an escort of two stalwart adjectives. Images sprang to his mind as profuse and fat as mushrooms after rain... He was learned in sentence-structure, simple, complex, compound and compound-complex, and could not only compose a period, with clauses and sub-clauses, of the most choice elaboration, but bring it to a conclusion with a triumphant clang that had all the effect of a door slammed in your face."

How wonderful all this is said. Maugham is a master of the pen, and it does not matter in the least, that the above description contains so many metaphors, adjectives, etc. etc. It carries us away, and thus it achieves the intended purpose.

"Metaphor", said Professor Fenollosa, who was enraptured by Chinese poems, written in their ideographic writing, "Metaphor, the revealer of nature, is the very substance of poetry. The known interprets the obscure, the universe is alive with myth." (31)

In a previous chapter "Not for Poets" on page 102, we have seen how vivid our symbols look, and how poetical expressions can be formed. If semantography becomes a practical reality, then poems in symbol writing are bound to happen.

A symbol at the beginning of such lines, indicating poetry, should give the writer the privilege to write freely to his heart's desire, to storm the heaven on the wings of Pegasus. Thus we shall compose our new symbol:



a metaphorical
expression



wings
(of bird, pegasus, etc.)



a poetical
expression



poetry

Our new symbol looks like a flower, and a flower it should represent in metaphor, in poetry, and last but not least, ^{in the} symbol.

The author has tried to translate some poems into symbols, and the result was interesting. It is a quite new experience. In reading the symbol lines, the actual sound and rhythm of the mother tongue is subdued. The images appear directly in the mind. The usual translation, which we have to perform subconsciously, the meaning of the words transformed into the images, disappears as an obstacle. Instead of the ear, which is the main recipient of the music of words and rhyme, the eye takes in the beauty of the lines of geometry. A very interesting experience.

I have tried to compose a symbol poem, and you find it in the last pages. However, before ridiculing it, just think about the following fact, of the poetry in the English, the French, the Spanish and other languages, older than 500 years, is hopelessly lost to us. To appreciate old poems, we would have to translate them, literally.

Whereas a poem written 4000 years ago in the symbol writing of the Chinese is as fresh today as it was 4000 years ago, although that old language died long ago. And such poems can be read in any of the many Chinese tongues. Just think of this marvel.

THE FUTURE OF WORDS

"You can fool some people most of the time.
 You can fool most people some times.
 But with some words you can fool most people most of the time."
 "A new word and a sucker, who falls for it, is born every minute."

Variations of a well-known American tune.

"Words are very important things: at the lowest estimate they are indispensable counters of communication.

Words are as beacons to lighten the darkness of our ignorance, but too many of us have been blinded with an excess of light; the excess is ours. Words are a solvent of clotted prejudice, but too many of us have made of them a reinforcement of the insensate atavism of inherited opinions. We have allowed too many of the beacons to become wreckers' lights; too many of them to become self-important and arrogantly autonomous. Especially during a war.

War makes, of fashionable words that would in peace-time die a natural and unmourning death, words of power: verbal sticks with which to beat the public or verbal drugs with which to send them to sleep, - although far too many persons are administering the drug to themselves and thereby committing spiritual hara-kiri."

Eric Partridge (86)

"Henry L. Mencken, the premier joss-smasher and insult-hurler in the Republic, has just hurled another 300,000 hand-picked words into the fray within the covers of a book labelled, "Supplement Two, The American Language".

Mencken began to study American speechways about 1905. Fourteen years later he produced "The American Language" which was enlarged through subsequent editions until it ran to 800 pages.

Since the volume had by then become almost too heavy to move except by hydraulic pressure Mencken adopted the expedient of presenting his later researches in the form of Supplements.

"Supplement One" came off his production line in 1945. It ran to more than 750 pages. Now, "Supplement Two" has been printed. With more than 900 pages, it is the largest of the three volumes."

S.J. Baker (87)

Henry L. Mencken, the grand old man of language study, who knows more than anybody else that words are born almost every minute, change their meaning and die to make place for other words - Henry L. Mencken makes fun of all those reformers, who want to direct this incessant outburst into rigidly prescribed channels; the spelling reformers, the pronunciation reformers and the advocates of a new phonetic alphabet. And now, I come up with this crazy idea of semantography.

Sometimes, in my day dreams, I am haunted by a distant rumbling which comes nearer and nearer until it becomes a deafening roar: my visionary ear hears the laughter of all the professional linguists, grammarians, logicians and, very likely also semanticists, who will ridicule semantography as a practical joke.

Sometimes I feel, I am fighting a losing battle against time. Not my time, but the time of the men of learning, who could crush semantography effectively. If I am sure of one thing, it is, that they would not have the time to read through the whole book, least to study the proposal in earnest.

But this one I want to say: I never thought that semantography should become more than a practical tool for certain purposes. I never thought that ordinary writing should be abandoned in favour of a symbol writing. I never thought that this incessant coining of new words, which goes on 24 hours a day in all languages and all countries of the globe could ever be stopped, fenced off, directed in rigid channels. I am no fool to think this way.

On the other hand, there cannot be the slightest doubt, that the coining of new words follows a distinct trend. What happens now in language, happened in the study of chemistry during the last two centuries. I am sure that you will soon agree with me.

As far as I am concerned, I don't think that it is only a haphazard chance that a chemist wrote this book. On the contrary, I believe, that my lifelong training as a chemist was the primary factor, which forced me to look at language with the eyes of a chemist.

The chemists were the first to evolve an international symbol writing, readable in all languages, truer in meaning than phonetic writing, revealing the inherent structure, the inherent meaning and the inherent danger of the things which the symbols described.

In this international written language certain endings had certain distinct meanings. Any chemist all over the world knows the inherent meaning, structure, and sometimes danger symbolized by such endings as -H, -OH, -COH, -COOH, -CN, -NO₂, -NH₂, etc. etc.

After completing an international written language, the chemists set about to evolve an international spoken language. Again they decided that certain endings should symbolize certain definite meanings. The ending -ium should denote an element, like Aluminium, Plutonium. The ending -id should denote a compound of an element, like Chlorid (e); the ending -ate should indicate a salt from certain acids, like -sulfate, chlorate; the ending -ol marks an alcohol in organic chemistry, and there are other endings to indicate other definite meanings. To these suffixes, they invented prefixes, like hypo-, tio-, per- and others.

To indicate a multitude of units they added the number $(H_2O)_2$. To indicate the plural in general they added the letter n, like in $(H_2O)_n$.

Exactly in the same way, we denote the plural by adding the letter -s. In bygone times we had different words for singular and plural. The plural for cow, was kine, but today we say cow-s. But we still say mouse and mice, goose and geese. However, you may rest assured that in a not too distant future we shall say mouses and gooses.

Today the people coin new words every day and every hour, but in all cases without exception, we form the plural by adding a letter, and always the same letter -s. Or have you heard that the plural of generator or motor is formed generatoren or motine, that the plural of fuse is feese, the plural of jet is jixen. No one would be foolish enough to attempt such plural forms, and if he would, people would soon make "mistakes" and say "incorrectly" generators, motors, fuses and jets.

Who is responsible for this trend to uniformity in meaning? Otto Jespersen said: the children. We may extend this definition and say: the simple people, or should we say: the people with "common sense".

These simple people learn the names of THINGS, hammer, house, sun, flower, bloom, table, etc. With a simple straightforwardness of common sense they use the prefix to, to indicate the ACTION which these THINGS perform either by themselves or through us: to hammer, to house, to sun, to flower, to bloom, to table.

We formed to telephone and to telegraph and now we say to radio and to radar.

I have done nothing original in semantography. I just composed a symbol for what people have done long ago in language: add some phonetic symbols like -s or to, to indicate the plural of chemical THINGS and the physical ACTION of these THINGS.

We may be rest assured that -s and to are here to stay, simply because they are the outcome of our general education in mathematics, physics and chemistry. Magic and superstition which was once connected with words is fast disappearing. We realise that words are symbols for the things in our world, and we compose new symbols according to the scientific method. If our language should be similar in structure to the real world we must study the structure of the real world and then reform language accordingly.

This reform is going on without reformers, in fact against ^{some} grammarians and linguists, who tried to stem the tide. But there are grammarians and linguists who welcome this change, and who readily accept such common sense innovations and declare them "correct".

Take the auxiliary verb will. We say today I will, you will, he will, etc. etc. But not so long ago we used different words. We said wilt, just as we still say has. Soon we shall say I have, you have, he have, she have. Children and so-called "uneducated" people use either have throughout or has. Soon the ending for the third person singular will go.

And there is that monster, the irregular verb: shrink, shrank, shrunk, and others of a similar type. Have you heard a new word, for instance to overland, being conjugated overland, overlind, overlund. We form now the past by adding -ed. We say overlanded, telegraphed, and even okayed. Soon Bernard Shaws demand will be fulfilled: we shall say

say: I shranked instead of I shrank, I growed instead of I grew, and I thiked instead of I thought. The term would is very ambiguous, and we should reserve it for the conditionalis would (which in semantography is denoted by adding a question mark,?)

Again I wish to stress the fact, that these changes will come without force. Anyone who does not believe this, should devote a little time to the study of new words, which denote chemical THINGS, and he will find that invariably the plural is formed by adding an 's and the verb is formed by putting to in front of the word, and the past by -ed.

A new grammar is taking shape in which there are no exceptions to the rule. A simple grammar, a common sense grammar, a grammar based on chemistry, physics and mathematics, and - what is most amazing - a new grammar, which is not advocated by experts, but is growing almost by itself, out of the subconsciousness of the children and simple people who go through primary school education and who learn a bit of mathematics and natural sciences.

I believe that there are definite reasons why the language of the people of Great Britain and North America is the most advanced, the most simplified in this respect. I am sure that they will add reforms in spelling and make English the language in which there is a minimum of exceptions to the rule, contrary to all the other languages, in which one irregularity "chases" the other.

The English speaking people inaugurated the age of technology. They were the first to make machines, to measure with rulers, to use common sense, mathematics and natural sciences. It had an effect on their language. They simplified their words and they invented new words and used them in the simplest possible way.

But there is another factor of great importance in this process: the centuries old tradition in democratic ways of life, in "free speech" in every respect. In the English language you find something, which you will not find for instance in the German language; in fact it is almost unthinkable in German.

In English you may write - or to say it better - even the grammarians allow you to write a host of words in more than one way. You can write according to your fancy grey or gray, center or centre, color or colour, cheque or check, analyzing or analysing and even thru instead of through and nite instead of night. The trouble here is with the linguists who have failed to provide a simple and clear phonetic alphabet or have failed to encourage reforms against the "highbrows", who felt elated in the regions of the language irregularities, where the simple people could not follow them.

So the simple people had to help themselves. Why writing colour, when you don't pronounce the u? Color is much simpler. You never say centr-e, but you say cent-er, so let's write it this way.

What is laudable is the fact, that the experts, the linguists and grammarians do not object, and do not admonish. Read what the grammarian George O. Curme said in the quotation on page 134. True enough, there are other grammarians who deplore any change in language, but they too are "affected" by a centuries old tradition in democracy and free speech. They do not try to force their rules on the whole nation.

Take for instance punctuation. Even in the English of modern literature you are free to make or omit commas in sentences. There is only one common sense rule to guide you: people should understand what you want to say. If you achieve your aim with few commas, your punctuation is "correct". If you employ a host of commas to the same aim, your punctuation is "correct" too.

Such a state of affairs is wholly impossible in German for instance. A Prussian king said once, that the sergeant-major is ^{to be} the teacher of the people. Free punctuation in German writing? Why - it almost amounts to high treason! Writing words in different ways? Just try it and see what happen! The words are laid down by an authority, for instance Prof. Duden and his book becomes the Bible of German spelling and any spelling not listed in the "Duden" is a break of the law and is punished accordingly. Then they have the "Great Duden" which is published with the support of the German language and printing organisations and experts. There you find strict rules not only for German words, but also for foreign words. They have thoroughly germanized Kultur and Partei, Autoritaet, and Staat. Exercise becomes Exerzieren, grenade becomes Granate, and infantry must be written Infanterie or else...

"Correct writing" reads in the German language "Rechtschreibung" and "Recht" does not only mean "richtig" (correct), it means also Justice, Law and Order - Right, and they see to it that Duden's law is obeyed.

Webster's dictionary lists colour and color, centre and center, but ^{English} some dictionaries which printed in Germany list only colour and centre.

Sure enough, there are some reformers of the German language, who strive for simplicity and who are able to force through some simplified words, but they are fighting a losing battle. Sometimes the reform is just the other way. Shortly before the thirties, the word Strasse (Street) was reformed. A phonetic reform would have been Schtrasse (because this is the way how they pronounce it) Instead they decreed that Strasse must be written now Strasze, and some towns actually started to scrap their tens of thousands of street plates.


So it comes that German is one of the "advanced" languages most difficult to learn. There are thousands of exceptions to the rule and each exception is in itself a rule. Take the simplest situation in German grammar: the plural form. It is a nightmare. You have to learn the plural of each word separately. There is nothing to guide you. Vater becomes Vaeter, Burg - Burg-en, Schwester - Schwester-n, Haus - Haeus-er, Schuss - Schuess-e, Weib - Weib-er, Sofa - Sofa-s, and sometimes no ending at all Meister - Meister, Gebaeude - Gebaeude. The only way to find out how to write of a multitude of master-s is to use the female article die Meister. Read what Mark Twain found out in Germany, a turn^{up} is a female and a girl has no sex - die Ruebe and das Maedchen.

The trouble is that the Germans don't rise against such nonsense. They obey.

Now, if some reader may object to the foregoing paragraphs, I am sure that they will agree that grammar teaching in school "is" a curse and a scourge! Something must be done about it - in all languages.

I propose the use of semantography for grammar teaching. It would thus become a side line to physics and chemistry, and girls and boys like these items. If we indicate the "natural rules", all words used according to these rules will be easily learned and the irregularities will become a humorous item to be laughed at. However, if grammar teaching becomes a hilarious item, the girls and boys will like it, and in the same time they will absorb the irregularities easier - and will discard them little by little.

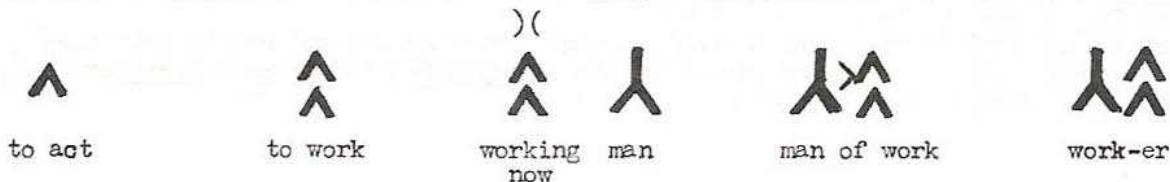
Let us now use the grammar of semantography in a new "visual education" of grammar.

indicator	□	^))((
symbol		action	past	present	future
word	hammer	<u>to hammer</u>	hammer- <u>ed</u>	hammer- <u>ing</u>	<u>will hammer</u>
indicator	>	<	∨	∨.	?
symbol	active	passive	before - <u>quality</u> - after - <u>action</u> -		conditional
word	<u>to hammer at</u> (transitive)	<u>to be hammer-ed</u>	hammer- <u>able</u>	hammer- <u>ed</u>	<u>would hammer</u>

In this new kind of grammar teaching, the child is to be given a hammer and some pieces of material like a flat piece of steel, copper, and breakable plastics or the like. He will learn those grammatical notions in a play full of fun. Then you can proceed showing him that the words hammer-able and hammer-ed are vague in meaning, depending how he evaluates the result of the performed actions. For further information turn to page 243.

Then give him any other tool, for instance a chair or a pillow or any other seat. Then let him evolve the tenses. Then tell him that he may say to sit or to seat and that there is the passive form to be seat-ed. Then tell him of the past form sat or should he better say seat-ed. In this way, he would become aware of the regular forms and of the irregularities in language. Such teaching might be of lasting effect.

Then we may go on analysing word combinations, such as the name of a THING connected with an ACTION and see whether these word combinations are formed according to the "common sense" of physics. For instance is a working man, always working?



Well, can we say: This working man is resting, or This working man is sleeping. Apparently this is a non-sensical expression. Can a sleeping man be a working man?

And how about a Returning Officer?

Before we turn to this nonsense, let us for a moment contemplate our symbol for work.

Our small indicator for ACTION, (how we evolved it see on page 126 and 139) is usually employed high up \wedge . When we put it between the lines \wedge it forms the verb to act. Then to express the meaning of work we double and "highten" the meaning \wedge indicating that work \wedge means to act for a purpose, and sure enough, the symbol for purpose \gg and for the particle for \gg is similar in outline.

This is one example of the many found in this ^{showing} book, how the geometrical lines are employed to express meanings which are related in structure to each other. We can't find such expressions of related meanings in phonetic writing. There is nothing to indicate that the phonetic symbol compounds a-c-t-i-o-n and w-o-r-k and p-u-r-p-o-s-e are related to each other.

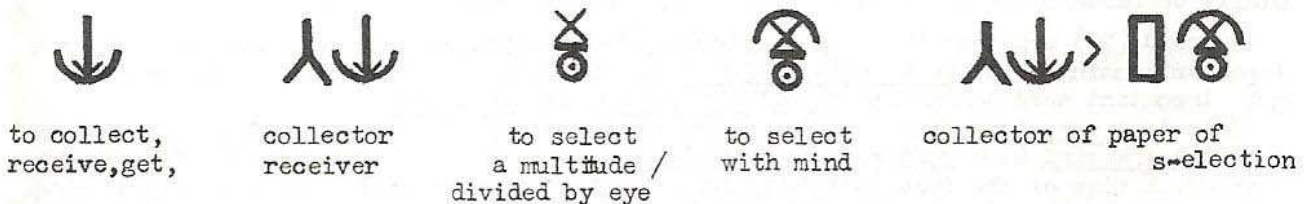
Similarly the meanings of the symbols ^{for} a-c-t-i-v-e and p-a-s-s-i-v-e are strongly related to each other. In fact, their geometrical representation \langle and \rangle indicates relation. This book is full of such examples, proving that a geometrical writing is truer in meaning ^{we} than phonetic writing, because it is drawn by trying to indicate structural relations which find in our world.

Guided by these thoughts we shall now evolve the symbol for officer to form our symbol for Returning Officer. An officer is not only a man of the army, also he is not only a man who works in an office. So what is he "basically", seen with the eyes of a physicist?

He is entrusted with the performing of certain actions, with work for a purpose. Consequently there should not be any difference in the symbol for worker and officer. Even the president of a state considers himself a worker. We may add another symbol if we want to indicate the ^{which} work the worker-officer is doing, a hammer, a pen, a retort, etc. Now what is the basic meaning of Returning Officer, and how would you draw the symbol if you hear this word combination for the first time?



Now, you know better. A Returning Officer is not a man who returns, walking on his legs. A Returning Officer is actually a Vote Collector. Well, why don't we say so?



Now, the collector may collect paper votes on a beauty contest, or a government election. In all such cases we shall indicate with a symbol what votes he collects. But - confound the man who invented the term Returning Officer. A citizen, who has learned semantography in his youth, wouldn't invent such non-sensical, meaningless word combinations. If we care to look through our word treasure we shall find thousands of such combinations.

What is a Consulting Engineer? And is there such a thing as a retired consulting engineer, who hasn't ^{done} any consulting for the last ten years? Shouldn't we better say Consultable Engineer, or better drop the action word in front of the man and say Engineer for Consultation. The symbol for Consultation is the same as for Opinion (mind and mouth, see p.176) and we may add another symbol stating Engineer for Consultation on chemistry, or weaving, or machines, or electrical machines, etc. etc. It is simple enough and to the point.

If you compare both symbol compounds, you realize at a glance the correct one. We want to describe a table, therefore the symbol for table must come first. The other method is: we write down first a tree and only at the end do we find what it is all about: a table. Rundle said:

"If we first examine the French rendering, we see that the first statement (table) is a statement of the main point. We then proceed to learn that it is made of wood, and then later that the wood is of a particular kind 'oak'. Thus in French (as also in all the other Romance languages) we pass from the general to the particular. In the case of the English and German, and indeed in all the languages of the Teutonic family, the first noun is concerned with the smallest detail 'oak', from which we pass to the more general term 'wood' and only at the end do we find the main idea 'table'. Here the mental process is the exact reverse.

Although this ^(even) order may seem very strange and unnatural to us English, yet from many standpoints it is so much more logical to go from the general to the particular, i.e. to say what you are talking about and then to describe it afterwards. The mental effort required in understanding the English oakwood table is very different from that required by the French equivalent. In the case of English, we have to carry in our mind the details of the statement until we reach the word table. We can then paint a mental picture of the object. In the case of French, however, we can draw the outline picture when we hear the word table, and we can then paint-in the details as we proceed to the rest of the description."

I have nothing to add to these lucid explanations. What delights me is the metaphor which Rundle used: "we can draw the outline picture when we hear the word table".

Rundle mentioned a symbol writing on various occasions in his book:

"Languages of an ideographic type, are more truly international languages. The musical 'Old Notation' is used by musicians irrespective of their native languages. The 'Arabic' system of numerals overrides all the linguistic barriers of Europe. It is like the 'ideographs' of written Chinese..."

I have quoted Rundle on many occasions in this book. He mentions Leibnitz too, and I am sure he will be interested to hear that his metaphor, mentioned above, has become a reality. We can now draw the outline picture in the symbols of semantography. And we shall draw the outline of the thing we are talking about, first, following the French example: une table en bois de chene. We see ^{why} now we have sometimes employed particle symbols (from, for, of, to etc.) in a symbol compound. They correspond with the French particles.

There should not be any difficulty in English. We can say: A table from oakwood or fully analytical a table of wood from oak. English is a hybrid of Romance and Teutonic construction; therefore no difficulty will be encountered here. Even in a wholly Teutonic language, the logical word order does not present any difficulty, ^{German} in speaking: Ein Tisch vom Holz der Eiche, instead of the confusing letter cluster: Ein Eichenholztisch.

Moreover, a symbol in semantography will be read like any foreign writing is read: it will be looked over at a glance and then pronounced in the native word order.









We can therefore agree that symbol compounds in semantography should be written in one way only, from the general to the particular. Again the teaching of semantography would have a good effect on the composition of new word combinations. Here below are a few specimens as existing today:

<u>German</u>	<u>English</u>	<u>French</u>	<u>Semantography</u>
□	^	^	^
○ □	○ □	□ >> ○	□ ○
Speise Zimmer Food Room it may also mean a food store room	dining room nonsensical, compare dining person	salle a manger room for eating	room (fr) eating

The German word Speise means actually food, and therefore Speise Zimmer should indicate a pantry. To indicate a pantry the Germans say Speise Kammer. The word Kammer corresponds to the English Chamber, but means in German a small room. However, the Germans have another term Ess Zimmer, which corresponds somehow to dining room. In both cases, however, the mental process is reversed to the logical word order.

In semantography, we do not need the hyphen (-). Even, if we should find a use for it, we can't employ the same short horizontal line —, because it is the small minus sign. However, we shall later see, that we have another possibility of employ^{ing} a symbol which can do that work, which the hyphen usually does.

We have learned in previous chapters, that we could even dispense with the ACTION indicator on top of the symbol for food. We would have to use the indicator for THING and ACTION, if the dining room and the pantry are on the same gangway, in order to avoid mistakes. For restaurants, hotels, ships and trains, however, no indicator is necessary. In regard to a restaurant car, we have the same nonsensical combination in English: dining car, indicating a car in the action of dining. Sure enough, we have also a car which goes to sleep.

<u>German</u>	<u>English</u>	<u>French</u>	<u>Semantography</u>				
							
Schlaf	Wagen	Sleeping Car	Wagon - Lits	Car (with) Bed(s)			
Sleep	Car	nonsensical	Car - Beds				

The expression sleeping car should be abandoned. Even sleep car is better. The normal combination would be bed-car but confound the man who invented "sleeper" and "diner".

In the foregoing paragraphs we handled compound words, indicating two THINGS, like Bed-car, Brick-yard, etc. Earlier we have seen that compound meanings could be made by adding an ACTION word to a THING word, like Working-man. The compound Sleeping-car is built similarly. But we must realize, that the inventor of such words did not think that a working man is always working, or that a sleeping car is sleeping. What he did in his mind was an abstraction. He abstracted some characteristics from the ACTION working and sleeping, and added these abstractions to some other words. In short, he used these verb forms as adjectives, and we have seen that they could be termed adjectives from the grammar point of view.

The man is beautiful

The man is working

The beautiful man

The working man

But according to the point of view of physics: working is an ACTION and beautiful is a human EVALUATION.

In the following paragraphs we shall deal with human EVALUATIONS in compound meanings. We should, however, bear in mind that not only adjectives (beautiful) and adjective nouns (beauty) fall in this class, but also ^{of THINGS and ACTIONS} any meaning/pertaining to EVALUATION with our senses (a beauty, a THING, beautify, ACTION). In this class do not only belong the adjectives thoughtful, stupid and wise, but also the terms thought, idea, abstraction, etc. We have termed these words also SENSE REACTIONS, and although the chemists and physicists will tell you that all human EVALUATIONS originate by physical actions of the chemical cells of our body and brain, they will tell you, that we are still utterly ignorant of the chemophysical processes involved. Consequently we must term all words pertaining to these sense reactions, be they feeling, thinking or any other reaction of our senses as HUMAN EVALUATIONS, which are vague in meaning and which differ from one individual to the other.

The term Beauty may mean an abstraction, but it may be used to indicate a definite THING. She is a beauty, may indicate a girl, or a race horse, or a ship. To be more to the point, we may form a compound word for instance beauty-girl or girl-beauty, or (without the hyphen) just girl beauty and horse beauty.

Well, what do we mean by these different combinations:

girl-beauty

beauty-girl

You will soon realize, that we are thinking according to the "perverted", illogical Teutonic word-order, in putting the more important word at the end, instead of the beginning.

In the compound girl-beauty we are concerned primarily with beauty, a girlish beauty. In the compound beauty-girl we are concerned primarily with a girl, a beautiful girl.

But in semantography we write according to the logical order, the important meaning first.



girl of beauty



beauty of girl

Now, these two symbol compounds need some explanation.

(1) We realize that, when we use the particles to combine two meanings, we arrive at the logical word order, in which the important meaning (what it is all about) comes first. A girl OF beauty and beauty OF a girl.

(2) The symbol for female human being indicates a chemical entity in our world, whereas the symbol for beauty indicates an EVALUATION, a SENSE REACTION which we made with our senses, symbolized by the eye and the Id part of the mind ("colloquially" a heart). These parts of our body are chemical THINGS, symbolized as such only when we put the THING □ indicator on top of the symbols. Without this indicator, they indicate the sense reaction.

(3) The symbol for female does not indicate a girl. To symbolize this meaning we would have to add another symbol young. A girl is symbolized as a young female. However, in order not to confuse the symbol by putting two EVALUATIONS young and beautiful behind the female symbol, we have refrained from adding the symbol for young. The symbols on the foregoing page should be correctly read: female of beauty and beauty of female.

Actually, we shall not write such compound symbols in the way indicated. Using a human EVALUATION means confusion enough, we should keep such a symbol safely separated from the THING symbol, either by ^{it}stand it apart: beautiful girl, or by separating it by a comma (,): girl, beautiful.

And this leads us to a very important problem: Should we put the adjective before the noun or behind. In some languages this is done differently, and this affects semantography which has to fit all languages.

In English we do put the adjective before the THING. We say:

The beautiful theatre but also The theatre beautiful

But you will agree that the second expression is very seldomly used, and you may again realize that here we have the same Teutonic word order, putting the less important word first.

Two pages ago you have found the quotation from Rundle, in which he explains that the Romance word order is the logical one, to be preferred before the Teutonic one. A few sentences concerning the adjective have been omitted from that quotation. Here they are:

"This same difference shows itself in the way the two families of languages use their adjective before the noun it qualifies, as a red book. German: ein rotes Buch; the Romance languages usually place the adjective after the noun, as French: un livre rouge, Italian: un libro rosso.

Although this order may seem very strange and unnatural to us English, yet from many standpoints it is so much more logical to go from the general to the particular, i.e. to say what you are talking about and then to describe it afterwards."

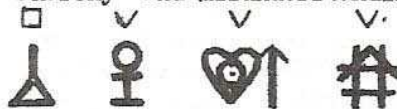
Well, what shall we do? We must decree a rule for semantography to be faithfully obeyed, in order to avoid misunderstanding. On the other hand, we use adjectives incessantly. Almost no noun is pronounced with^{only} the accompaniment of an adjective. If we decree that the Teutonic word order should be faithfully adhered to, the writer reared in the Romance word order would have great mental difficulties to control his usual line of thought in writing. And we face this dilemma with other languages.

Well, we have agreed to put the actual meaning first in a compound symbol. But we are here concerned with the arrangement of two separated words. If we put the adjective behind (as we should do), we will get complaints from English and other writers, accustomed to put it before. Semantography should have simple rules, but it should not impose great strain on the writer. It should be practical, which means easy and simple.

We shall feel a bit better, when we realize that there are no strict rules in the languages. In Italian, for instance we usually say: una signorina bella (a girl beautiful) but sometimes we say: una bella signorina.

In English we put the adjective before a THING word, but behind an ACTION verb. We say: the beautiful girl is^{dressed} beautifully. Sometimes we say: Dressed beautifully, she entered the room. But sometimes we put the words the other way round: Beautifully dressed, she entered the room. In regard to the verb, there is no distinct rule in English.


Now, this may lead to "anarchy" and misunderstanding. If someone writes in semantography



It may mean: a female, young, beautiful, dressed (dressed has here no adverb; young & beautiful refer to the female)
 or: " " , young, beautifully dressed
 or: " " , "youngish", beautifully dressed (youngish refers to the style of the dress; we should say: "youngishly")


Considering these possible misunderstandings we must keep this in mind:

- (1) Semantography should be used for simple, descriptive reports, and it stands to reason that the writer, trained in the system of semantography will avoid adjectives.
- (2) We must be aware that people of different languages are putting the adjectives before the noun or verb in one language and after them in another language, and that these habits are so deeply ingrained, that we must find a way to allow each national to write as he/accustomed to write.

To comply with the latter demand, we shall invent a small symbol to be used as a connecting link, similarly to the hyphen in phonetic writing. This symbol should look like the half link of a chain, thus  and it shall be put on the lower line to serve as a connector of an adjective, and in the middle, to serve as a hyphen. You may write as you like to, placing the adjective before or behind the noun, provided you bind it to the noun/it belongs:



But we might draw the symbols in the more logical word order:

female young, dressed beautifully
provided again that we use our new symbol .

This line reads: a female, young, beautifully dressed.
Or in good English a young female, beautifully dressed.

We don't need a hyphen in semantography, but ^{we may in} future standardizations with regard to certain compound symbols use a hyphen as a connecting link between two meanings. This might be necessary for technical meanings.



machine f. flying propeller driven

turbo-jet using a propeller

jet-plane (no propeller)

rocket-plane (using Oxygen O₂)

Semantography shall be a writing, systematically devised and controlled by an institute. Consequently there should not be any symbol compound which has two different meanings. If there are two meanings which are expressed by one symbol compound (and thus cause misunderstanding) the Institute will evolve a differentiation and put ⁱⁿ the new supplement or the new edition of the dictionary. The new hyphen symbol may serve for such differentiation.

But we have used another connecting symbol throughout this book, the comma (,). It has an important place in the symbolization of our words. We can use two words in any language for instance young female or even young human female, but we have also one word girl to express the meaning of two and sometimes three words. Similarly we can say: small mountain or hill; very small mountain or mound. We may use the comma (,) to indicate such single words, in which two or more meanings are expressed.



a young female

a girl

a baby (girl)

a girl, 17 years

a girl, between 15 - 20 years/



a low mountain

a hill

a mound

mountain 350 m high

mt. near (abt) 350 m

As far as I am concerned I don't believe that these differentiations are of any importance. We don't want "literal" translations in reports in semantography. If we want to express the meaning of hill, and the reader has no equivalent word in his mother tongue for hill, he would translate it low mountain. We can remove any small talk evaluation by inserting mathematical figures: a girl 17 years of age, a mountain 350 metres high, or we may use the symbol for near and say near 350 m (about, approximately).

I believe that the adjective hyphen (on the ground line) would not be necessary. We do not usually heap one adjective upon the other, and we should refrain from using them.

In the foregoing pages you have found 4 different proposals, concerning the addition of an EVALUATION, in particular an adjective or adverb to a word denoting a THING or an ACTION. It may well be, that the members of the Society of Semantography will make a final choice, and decide in favour of the comma. Then the proposal, concerning the new hyphen symbol, will be abolished.

In studying the ways according to which adjectives are formed, we may find interesting material, which may be used to make grammar study in school an absorbing, and even hilarious item.

The pupils should learn to distinguish between, what we may call "genuine" adjectives and derived adjectives. The "genuine" adjectives are those which we termed human EVALUATION

Among the genuine adjectives we find for instance:

hot and cold. In using a thermo-meter, we can deal with their vagueness.

rough and smooth. Here we have no yardstick. Sometimes we use a derived adjective. We derive a quality from the THINGS and say silky or velvety.

good and bad How we can find yardsticks for these EVALUATIONS will be shown in the third book.

The derived adjectives are those, which we abstract from the words denoting a THING or ACTION. In most cases, they are harmless. Sometimes however, they may cause misunderstanding.

From telephone we derive telephonic. Then we hitch this to another word:

telephonic conversation seems clear enough, but telephonic mishap may mean a mishap in the working of a telephone, but also a mishap concerning misunderstanding by telephone.

Sometimes an adjective is used in front of two successive THING words, and you don't know immediately to what word the adjective belongs: electric lamp-factory, must be interpreted as meaning a factory for electric lamps, but not an electric factory. Humorous items are the pickled fish merchant, the bent furniture maker. Here the adjective is formed from the past participle denoting an ACTION.

Other non-sensical derivations are:

From rest we derive restive, which means exactly the contrary. A restive man is not ^{rest} at/

From arbitration we derive arbitrary. An arbitrary decision is the contrary of a decision by arbitration.

From the TIME notion night we derive nightly, which does not mean nightlike, but every night. We may say a nightish darkness, which may refer to a darkness in a closed room. Nightish doesn't sound nice, so we derived nocturnal from noctis, nox, the Latin word for night. Nocturnal darkness may mean the darkness of the night, but also a reference to a closed room (with bright daylight outside). However a nocturnal bird may mean anything a bird with black feathers, a bird with a weird appearance, etc. It means a bird which flies at night. Such word combinations may block understanding for a foreigner.

From space we derive spatial. A spatial conception means a conception in space. However a similar derivation spacious has a different meaning. A spacious house is a big house

From chemistry we derive chemical. A chemical THING means a piece of chemical matter. We chose this combination, because the words "things" and "matters" are used for "anything" including belief, sex, superstition, etc. etc. However, a foreigner may be quite bewildered by the word combination: a chemical student and chemical education. Here as well as in the foregoing instances, we had better avoid the adjectival derivation and say a student of chemistry and education in chemistry.

Misunderstanding and confusion must increase when we abstract adjectives from one THING and attach them to another THING, especially a word, meaning a human or a human activity.

From individual we derive individualistic. But what is individualistic behaviour? Try to define it and then let other people define it and you will be surprised about their different definition and evaluation of this word combination.

From animal we derive animalic or animalistic. Is "love" an animalistic habit, and what precisely is an animalistic habit?

From pig we derived piggish and then formed piggishness and a piggish person.

Misunderstanding and vagueness must further increase if we couple two human EVALUATION words, the one an adjective, the other a noun. Writers use the combination a hateful love or a loving hate or a lovingly hate. However the derivation love-ly, means something different again. It means beautiful, not love-like (whatever this derivation may mean).

On many occasions in this book, the suggestion has come up, that semantography may be used to teach grammar, the grammar of our mother tongue. Any of the above mentioned examples could be written in symbols, and the possibility of misunderstanding pointed out. In symbolizing the differences in the sentence: A fast horse, tied fast, and being fast asleep, the children would become ^{differences and} aware of the irregularities in meaning. In future they might ^{misleading and} discard non-sensical words and shape new words in a better way.

SEMANTICS

"Offhand one would expect libraries full of books analysing linguistic situations, and chairs of semantics in every university. Yet Richards said in 1936 that no respectable treatise on the theory of linguistic interpretation was in existence... There are few if any professional students or teachers of semantics. Even the theory of tennis or of football has been more thoroughly inquired into. So I have no accredited systematized body of knowledge to set before you, but rather the result of a series of raids into this laboratory and that..."

Stuart Chase in 1938 (26)

My intention in regard to the third book is to write a series of chapters about the various systems which certain semanticists have evolved. I want to show how they have tackled the problems in language and understanding; the terms they have established, and how these terms are to be operated. It will be fascinating to see, how those scholars, attacking the problems from different angles, have come to different conclusions, which however show a "family likeness".

Consequently, it would be interesting to see, that the system of semantography fits somehow all these different systems, and helps to clear up misunderstanding which may arise in the reader, who is not accustomed to the "language of science", which some scholars term "jargon" or "highbrow" or the like. In many cases, it can be shown, that the use of Latin and Greek roots for the invention of new terms is one of the obstacles to understanding to the "man in the street", that means to most of us. ^{well be that} It may /, almost everyone of us got suspicious the first time we heard the word "Semantics".

"Semantics", no doubt, one of those new-fangled notions, which professors can't put in simple words, "most of us ^{have} might / said. And we would ^{have} believed that this "Semantics" is something which does not concern us at all, and ^{which} should be left with the professors. Yet, it can be easily proved, ^{that} semantics concerns us all, everyone of us, and ^{neglect} it can and did affect the peoples of the world in a most terrible way. So, we had better become acquainted with it.

We have learned on previous occasions, that the word semantics is derived from the Greek words sēma a sign, sēmainein to signify, and sēmantikos significant meaning. The term Semantics indicates therefore the study or theory of meaning.

Who is a semanticist? Everyone of us who asks: "What do you mean!"

However, when we look into the books of the professional semanticists, we are amazed by the fact, that everyone gives the term Semantics a different meaning. We shall see from the quotations below, that there is sharp disagreement between the semanticists, and they themselves give an example how differently certain words are interpreted in different minds. The reason for this may perhaps be found in the fact, that the science of semantics is a very young one. Just think, that the meaning of say Chemistry is today well defined, whereas many centuries back, it was connected with all kinds of notions which today are classified under special headings.

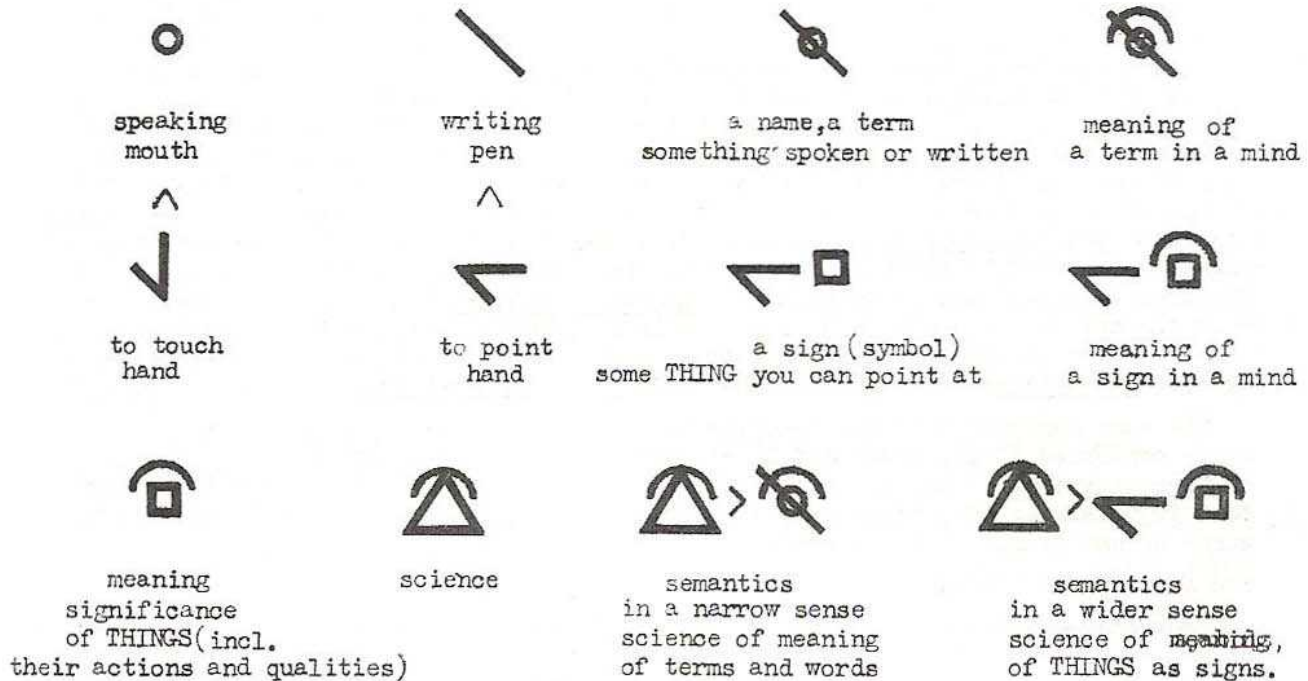
Since 1938 new books did appear, more scholars took up the study; and the structure of a new science took shape, which will soon become an item in every school from the university down to the kindergarten. For the reader of this book, it may have become clear what I understand by the term of Semantics: the study of the meaning of words and their influence on human behaviour. I shall therefore refer only to those books, which favour this line. I shall not deal with the theories of the logicians, who have already evolved symbols for proposition / formulae, which deal with all kind of language situations. I am afraid that many logicians ^{at} may look with utter contempt at my system of semantography; they may point out its "unscientific method" and its fallacies.

To this I have to say: Mathematicians have written highly scientific treatises on the "Foundations of Mathematics", ^{books} which / are mentally beyond the reach of the common people. Fortunately, there were practical teachers, who taught the people the rudiments of mathematics, so that they could use ^{them} in their daily lives and avoid misunderstandings in regard to the foundations of mathematics. Today, every housewife and every grocer uses these foundations to get along.

Similarly, I have tried to find a simple method ^{of} / how to teach children, who will be the citizen of to-morrow, semantics and logics. We need these items in our daily lives even more desperately than we need simple mathematics and other sciences.

My foremost aim in making semantography was: to take the harm out of words. I have harmed and I have been harmed by words, and I have witnessed how words have caused great harm. to many millions of people.

Consequently, I at least will not be harmed when ^{some} logicians and professional semantists ridicule my system and my notions, and when other scientists will dismiss my ideas about chemistry, physics and mathematics in regard to language. I draw my symbols and then I understand why there is disagreement among the scientists.



These symbols show the symbol for the mind, and we know (just by looking at the people in the street) that there are not two human beings who are alike, ^{and} whose minds are alike. Consequently no two minds will think alike. This refers even to biologically identical twins (who came out of a single fertilized ovum). From the point of heredity they are perfectly alike. But environment will soon make these twins different beings, who have their different viewpoints on this and that.

Naturally, not two semanticists will think alike, and the meaning of the term "semantics" will differ from one mind to the other. How then shall we judge the different systems? We need semantics in our daily life. Consequently we should use those methods which are easier to handle, which are more practical, which simple people can handle.

Moreover, we realize that any study of semantics must start from the real things of our world, the things we see with our eye, the things we can touch or point at with our hand. Our different minds may contemplate them differently, may give them different terms in the same or in different languages, spoken or written differently, but - real THINGS, chemical THINGS we have to contemplate, not words alone.

"All things are symbols:
The external shows of Nature
Have their image in the mind,
As flowers and fruits and falling of the leaves"

said Longfellow

Then Longfellow was a semanticist. No doubt. So were all the poets and thinkers and so are you, if you care to think or ask: "What is the meaning of this and that?"

Consequently if we want to use quotations of semanticists, we would have to quote most of the great men, who in their writing have told us something about the meaning of things and words.

We should go back to Socrates, who said: "Define your terms". We should study Aristotle who has written a whole book Sophistici Elenchi, in which he classifies the fallacies of

language.

Ross, who translated some of Aristotle's writings (87) said:

"He laid his finger on those most important of all fallacies which are not adopted for the deception of others, but deceive the speakers themselves. His treatment takes account of many of the subtlest dangers to which reasoning is exposed.

In many cases his meaning has been misunderstood, and in others counsel has been darkened by the wilful application of his terms to entirely different types of fallacy."

We would have to go through the sayings of the semanticists of the last two thousand years. We would have to make long quotations from the writings of Locke (1632 - 1704) whose "Essay concerning Human Understanding" may well become a school book; what he has to say fits perfectly the confusion of our modern age. (see p. 420)

Such quotations would fill a whole book. What we can do in the framework of this book is to look up the books (in a public library) which we find in the catalogue under the heading "Semantics", leave out the books on formal logic and have a dip in those books which somehow come near our meaning of semantics. This we will do. Only a few lines here and there to wet the appetite of those readers who want to hear more about this fascinating subject. ^{the final edition of} In the third book, a short abstract of each system will be given.

The word semantics was first coined by Michael J. A. Bréal, who wrote in 1897 a treatise on the meaning of words. He believed to have opened up a new branch of modern science and - as it is customary among scientists - he invented a new term, derived from the Greek word semanticos. His paper has the title Essai de Semantique. Here are a few lines:

"We must remember that the teaching of the mother tongue has the advantage of being continued at all times and in all places, that it is spurred by the stimulus of necessity, that it has to deal with minds in the freshness of youth, and finally that it possesses the unique characteristics of linking words to things, and not the words of one language to the words of another language."

And from another page:

"Metaphor changes the meaning of words and creates new expressions on the spur of the moment. It is born from the instantaneous glimpse of the similarity between two objects or two acts. If it be accurate or picturesque, or even if it merely fills a gap in the vocabulary, its adoption is assured. But the metaphor remains such at its outset only; soon the mind becomes accustomed to the image."

The reader should not think that I have selected some lines of special importance. On the contrary. These are samples taken at random.

The work of Bréal was translated by J. P. Postgate, he himself a fervent semanticist. The above quotations were taken from his translation, to which he himself writes in the preface: (88)

"The study of meaning will revise not a few of our grammatical notions; and in no department of linguistic perhaps is this revision more needed. Here, it is true, the logician has lost much of his power; but the influence of the pedagogue is almost wholly impaired. Nothing is so hard to shake off as the old school-room; and pedagogy, not content with its early dominance, invades the territory of science, whose discoveries it seeks to discredit on the ground that they cannot be taught: *nil sine magno nita labore dedit mortalibus*, and it is unfortunately true that what is most troublesome to teach is often most instructive to learn. Because que, if are usually translated and in English, a very distinguished scholar writes that "accuracy of scholarship is chequed from the outset when a boy turns up his dictionary and finds one of the meanings given for que is or."

Little was heard about this new science from 1897 till 1922. In that year, two scholars C. K. Ogden and I. A. Richards wrote a book under the simple, but intriguing title The Meaning of Meaning (17). It is now considered the standard work on semantics, and many quotations have been made from it in previous chapters.

It is no haphazard coincidence, that C. K. Ogden invented Basic English. A man who has probed into the abyss of ambiguity, felt the need for simple and non-ambiguous statements. He selected 850 words from English and proved to the world that word economy is possible on an unheard-of scale. I have expressed my gratitude to Ogden in previous chapters. Without Basic English I would have never attempted this book.

J.P. Postgate wrote the preface to the Meaning of Meaning, and here are some quotations from the book, taken at random:

"Meaning, that pivotal term of every theory of language, cannot be treated without a satisfactory theory of signs. With some of its senses (in which 'my meaning' = 'what I am thinking of') the question to be answered is, in brief "What happens when we judge, or believe, or think of something; of what kind of entities does the something consist; and how is it related to the mental event which is our judging, our believing, our thinking."

They refer to other methods

"We can either use a grammar of "substantives" and "attributes" (Johnson, Logic), or one of "events" and "objects" (Whitehead, The Concept of Nature) or of "place" and "referent", according as we favour an Aristotelian outlook or that of modern physics, or the pictorial exposition of the views here advocated."

They cite other scholars

"We know how strong is the tendency to suppose that whatever has got a name has a real existence" (J.S. Mill)

"In talking of the quality blue we are really referring to the effect of external movements in a normal eye" (Helmholtz)

They give many examples of the power of words, in connection with superstition, and don't forget the humorous ones

"What guarantee have we that the planet regarded by astronomers as Uranus is really Uranus?" (Sachs)

They stress the viewpoint of the founder of the scientific method, Francis Bacon (1561-1626)

"In order to save ourselves from the "great sophism of all sophisms, equivocation or ambiguity of words" we must "imitate the wisdom of the mathematician" and make clear the sense in which we are using our terms, else "we are sure to end where we ought to have begun, in questions and differences about words."

"Here is the first distemper of learning when men study words, not matter." (Bacon)

Naturally, they have a lot to say about Locke's Essay on Human Understanding, and quote

"Vague and insignificant Forms of Speech, and abuse of Language, have so long passed for Mysteries of Science and for deep Learning... that it will not be easy to persuade either those who speak, or those who hear them, that they are but the covers of Ignorance, and Hindrance of true Knowledge. To break in upon the Sanctuary of Vanity and Ignorance will be, I suppose some service to Human Understanding". (Locke)

From Locke, they go to his contemporary, Leibnitz, who was so impressed by Locke's essay, that he wrote his own treatise under the same title New Essays concerning Human Understanding, which is written in the form of a dialogue between a representative of his views and another of Locke's views. (89)

Here I want to express my deep gratitude to Ogden and Richards for these quotations. As pointed out in a previous chapter, I worked for 4 years on my idea in China and only in 1946, when I came to Australia, could I get hold of The Meaning of Meaning. There I found to my delight, that Leibnitz had advocated a symbol writing like that, which I attempted to invent. But for Ogden and Richards, I may have never known the views of Leibnitz:

"Usually the different significations of the same word have some affinity; this makes one pass for another and does not give time to consider what is said with all the precision that is desirable."

They add: "What Leibnitz desired was a script or notation similar to that of the Chinese, but "better than theirs" and he thought that this "might be introduced if small figures were employed in the place of words, which would represent visible things by their lines, and the invisible, by the visible, which accompany them, adding thereto certain additional marks, suitable to make understood the flexions and the particles."

The representative of Leibnitz continues:

"This would be of service at first for easy communication with distant nations; but if introduced also among us, without however renouncing ordinary writing, the employment of this mode of writing would be useful in enriching the imagination, and

in giving thoughts less surd and verbal than we now have. It is true that the art of drawing, not being known by all, it follows that, excepting the books printed in this way (which everybody would soon learn to read), everyone could not avail themselves of it otherwise than by a method of printing, i.e. having the figures all engraved ready for printing upon paper, adding thereto afterwards with a pen the marks of the flexions or particles. But in time everybody would learn the plan in youth, so as not to be deprived of the convenience of this figured character, and would speak in truth to the eyes, and would be very agreeable to the people, just as in fact the peasants already have certain almanacs, telling them without words much that they ask."

To this the representative of Locke's view is made to reply:

"I think your thoughts will some day be carried out, so agreeable and natural appears to me this writing, and it seems to be of no little consequence for increasing the perfection of our mind, and rendering our conceptions more real."

Ogden and Richards continue with their own words:

"But this speculative construction, which first occupied his attention at the age of 18, and was constantly in his thoughts, especially about the year 1679, and when it became clear that he would not have the strength to proceed with it, still remains where Leibnitz thus left it."

I wonder, what Ogden and Richards would say to my attempt to take up the thread of Leibnitz thoughts, now after 300 years have passed.

In any case, there cannot be any doubt, that this system of semantography is an attempt ^{wards} to a practical realization of a symbol writing, which "would be of service for easy communication with distant nations... and would be useful in giving thoughts less surd and verbal than we now have." I fervently hope that Ogden and Richards will support my idea and I end these quotations with a last ^{one} from their book. They say:

"The understanding of the functions of language, of the many words in which words serve us and mislead us, must be an essential aim of all true education. Through language all our intellectual and much of our social heritage comes to us. Our whole outlook on life, our behaviour, our character are profoundly influenced by the use we are able to make of this, our chief means of contact with reality. A loose and insincere use of language leads not only to intellectual confusion, but to the shirking of vital issues or the acceptance of spurious formulae."

When The Meaning of Meaning came out in 1922 shortly after the first world war, nobody realized, that here was something which should be put into practical operation immediately, something which should have the same priority as the making of guns and the building of battleships. A faint murmur came across the channel and grew as the years passed by, until it became a deafening roar. The new semanticists appeared: Hitler, Goebbels, Rosenberg who spoke and shouted, and the others Himmler, Goering and the other henchmen, who executed - in every sense of the word - what the Fuehrer said.

Now, demagogues are not a product of modern times. Since language was invented, men have harangued other men. What has changed is the range of a man's voice. The radio made it possible that a man could speak to 50 millions of listeners and more, who would sit comfortably in their homes. To this invention we must add the rotation printing press. The results are disastrous.

Since the twenties the world has witnessed how nations and especially the German nation were whipped up to a frenzy by nothing else but words, until they virtually got mad, run amok, and stabbed off other nations, who happened to be around.

This terrific display of propaganda made many people think - in other countries. It was clear, something must be done about it, something practical. I do not refer to the men, who ordered re-armament, or to the men who advocated appeasement. I refer to the men, who thought that semantics must come into our education. These men recognized the disastrous results of propaganda in every country.

It is therefore no haphazard coincidence, that a practical man, an engineer took up the matter, Alfred Korzybski. In 1931 he published his "Science and Sanity", a heavy volume of over 800 pages. (56) Read other pages on Korzybski's work listed in the index.

He realised, what we all realise today, that words do not only play a great part in the relations of nations, but also in the relations of single individuals. The happy mood and the sane behaviour of a whole family could be shattered by a single word. The co-operation of the workers in a plant could be brought to nil by a single word. Riots could

follow the utterance of a single word. Korzybski began to examine words, just as he had examined machines and bridges before.

Unfortunately, Korzybski could not get away from the "language of science". For him, all those notions of mathematics, physics, logics, etc. were quite natural and he used them freely. But for the general public, it was just another scientific book with seven seals.

Another man had to come, who could speak plainly, or so colourfully that the general public found it quite amusing. Stuart Chase published his The Tyranny of Words in 1938. In his first pages he says something, which I want to have said for my writing: (26)

"It is a curious story I have to tell you. I shall not tell it very well, because it is almost as hard to investigate words with words as to lift oneself by one's bootlaces. The formal logicians will write me off in advance for this and other reasons, but I have a talisman against the sorceries of those who deal in formal logic. In due time I will reveal it. More serious are the many pits into which I am bound to fall, because of the persistence and strength of language habits which are not so much mine as a common racial heritage. As I write, I shall identify word with thing, I shall confuse levels of abstraction, I shall personify absolutes, I shall deal in varieties of word magic. Edit and revise as I may, many of the lapses will remain. But you are going to read a book where the author is at least on the watch for failures of meaning, at least alive to the grave difficulties of communication. That is something you do not encounter every day. After all, one has to begin somewhere, and this is my beginning.

I am going to tell you, as plainly as I can, what has been discovered about semantics so far; what it has done for me personally... and what it might do for men in general if enough of them could become acquainted with the discipline."

I have quoted Chase many times in previous chapters, and I hope that the reader has found him as interesting as many others have found him to be. Unfortunately, the book appeared too late to have any effect. Hitler has said the word, and the German ^{way} machine was set in motion. Fifty millions of people were doomed.

In the meantime, some university men were attracted by that practical and human side of semantics, and in 1941 a book appeared by Dr. Irving J. Lee of Northwestern University, Language Habits in Human Affairs (84). It is based on Korzybski's work, and it represents a very good study, written in a language, which is of no difficulty to any student. Here is the paragraph with which Lee refers to Korzybski, the engineer. I quote it here, because I feel somehow, that it vindicates my breaking-in in ^{the} realm of the linguists.

"The first world war had put into sharp focus the achievements of the physical scientists as compared with the failures of those who guide and advise us in our every day living. On the one hand, we see bridges and buildings standing up, guns and airplanes working, steam shovels and dynamos functioning efficiently. When the engineers planned, they ended with structures which are reliable. When they make predictions in their specialities, things have a way of turning out as per specification. But how about the men who govern our economic, political, and legal affairs?... The security we have with the engineers we do not have with the social "scientists" - if we measure their achievements. We cannot be sure that when they predict, things will so happen.

The question that Korzybski then posed was this: If both the physical structures and the social institutions are products of human nervous systems, what does an engineer do when he builds a bridge that the social scientists do not as invariably when they go to work? He put the answer in terms of the most easily observed activities of each - their talking. The engineer talks to himself (or calculates) in varied languages (words or figures) which are appropriate or similar in structure to the facts with which he has to deal. That is, he looks at the life facts and then makes what he has to say fit. His major effect is to make his talk, formulas, equations, etc. adequate to represent the facts. And when that is achieved, the bridges don't break down."

And on another page of his preface Lee said:

"An historian, someday, may call this the Era of the Organized Lie... Organized lying however, is by no means the only verbal problem with which we are faced today. There remains something even more fundamental - the necessity of knowing how to "talk sense" ..

In short, we have need of methods, simple, teachable, and useable, by which to break

through the conventionalised, stiffly resistant, and confusing habits of evaluation...

In 1939, talking to freshmen, Robert M. Hutchins said, "It is hard to think that education is important when the world is on fire; the temptation is to rush out and join the fire department."

We should here translate the issue this way: Firemen have to learn how to be efficient in the handling of ladders and hoses; and should students find themselves amid the conflagration of prejudice, social confusion, and unreflecting disorder, they too, had better learn how to deal with them before the flames consume them."

Dr. Lee has produced an excellent text book for students, with many pictures of people looking at the life facts, making evaluations in their heads and having words streaming out of their mouths and whirling around other persons' heads. The book is warmly recommended to everybody. I have refrained from quoting details of the actual text book, having in mind to make an abstract of Lee's teaching and of the teachings of the others, in my third book. For this reason, I shall quote again only passages of a general character from the book of Korzybski. Details from Lee's system, from Korzybski's or Ogden's and Richards' system, would only confuse the reader, when he is not presented with the complete structure.

Herebelow are a few lines from Korzybski's Science and Sanity: (56)

"A symbol may stand for: (1) Events outside our skin, or inside our skin in the fields belonging to physics, chemistry, physiology, etc. (2) Psycho-logical events inside our skin, or, in other words, for semantic reactions which may be considered 'sane', covering a field belonging to psycho-logics. (3) Semantic disturbances covering a pathological field belonging to psychiatry.

As the above divisions, together with their interconnections, cover the field of human symbolism, which, in 1933, have become, or are rapidly becoming, experimental sciences, it appears obvious that older 'metaphysics' of every description become illegitimate, affording only a very fertile field for study in psychiatry.

Because of structural and the above symbolic considerations based on Non-Aristotelian negative, non-identity premises, these conclusions appear as final; and, perhaps, for the first time bring to a focus the age-long problem of the subject-matter, character, value, and, in general, the status of the older 'metaphysics' in human economy. From the non-elementalistic, structural, and semantic point of view, the problems with which the older 'metaphysics' and 'philosophy' dealt, should be divided into two quite definite groups. One would include 'epistemology', or the theory of knowledge, which would ultimately merge with scientific and non-elementalistic psycho-logics, based on general semantics, structure, relations, multi-dimensional order, and the quantum mechanics of a given date; and the rest would represent semantic disturbances, to be studied by a generalized up-to-date psychiatry."

There appear to be three main factors, which account for the fact, that Korzybski's teaching has not penetrated "deeper" and has not reached great numbers of people.

The first is this kind of writing, which is "too high" for the 'man in the street', and I myself must confess very often a complete blank when reading the book. The above sample is taken at random. The whole book is written in the same manner. Yet Lee proved, that what Korzybski had to say, can be said in simple words understandable to any student. Read p. 54ff about the confusion created by Korzybski with the "I^s", See also index.

The second factor which must have irritated some men of science is the condemnation of Aristotle, whom Korzybski blames for many ills of humanity, concerning confusion and misunderstanding. Consequently, he builds up a Non-Aristotelian system, which he somehow brings in line with Non-Euclidian and Non-Newtonian theories, although - as his benevolent critic C. J. Keyser points out - that no one asserts that the Euclidian geometry or the Newtonian formulae are false, whereas Korzybski maintains that Aristotle's principles are "invariably false to facts". Keyser cites Aristotle to show that Aristotle never contemplated an "Is of Identity" as Korzybski accuses him. (90).

In any case, it is significant, that Lee did not mention Aristotle even once, when propounding Korzybski's theory. I dealt with the "is" on page 405ff.

The third factor, which may have irritated some men of the medical science, is the fact, that Korzybski, or at least some of his adherents, consider his General Semantics as a means to cure "mentally ill" persons.

During the war, and after the war new books on semantics appeared, some of the "popular" type, some of the "academic" type. A few lines from two books of the latter type are reproduced below.

From "Semantics" by Hugh Walpole (91)

"Semantics or semasiology is the study of the meaning of words. Semantics shows how ^{of} most of our words each has many meanings; and the word "Semantics" itself - the name of the study of the "meaning of meaning" - is no exception. Some writers on "Semantics" deal with very different matters from those which will be discussed under that name in this book...

On the other hand, some authorities who write about what I would call Semantics call it by other names... The student of Semantics studies words. When he tries to talk about "Semantics" he uses words to talk about a word which itself talks about nothing but words. Is not this like trying to lift himself by his bootstraps?"

And here is a sample from another book Signs, Language and Behaviour by Charles Morris (92) which too, tends to show the widespread disagreement, which prevails among the semanticists:

"There is wide disagreement as to when something is a sign. Some persons would unhesitatingly say that blushing is a sign, others would not. There are mechanical dogs which will come out of their kennels if one claps one's hand loudly in their presence. Is such clapping a sign? Are clothes signs of the personality of those who wear them? Is music a sign of anything? Is a word such as 'Go!' a sign in the same sense as is a green light on a street intersection? Are punctuation marks signs? Is the Parthenon a sign of Greek culture. Disagreements are widespread; they show that the term 'sign' is both vague and ambiguous."

"Most difficult topics in Semiotics: the interpretation of signs which are called by some "logical signs" or "formal signs", or "syncategorematic signs", terms which various authors applied to such features of languages as "or", "not", "some", "is", "+", "five" variables, word orders, suffixes, parts of speech, grammatical structure, punctuation devices, and the like. Here differences of opinion run riot. There is no agreement as to which terms belong to the intended class, whether these terms are properly regarded as signs, and if they are signs, whether they are designators, appraisors, prescriptors, or signs in a distinctive mode of signifying."

"Various attempts have been made under these circumstances to attain some simple classification which will embrace at least the majority of the ways in which signs are used. The most frequent of these attempts repeat or stem from Ogden and Richards' distinction between referential and emotive. Pollock distinguishes the referential and the evocative use of signs, Mace the referential and expressive, Reichenbach the cognitive and the instrumental, Feigl the informational and the non-cognitive, Stevenson the cognitive and the dynamic... These attempted classifications often confuse the signification and the uses of signs."

Together with Dr. Lee, other university men have formed a group, centred around Korzybski's General Semantics. They issue A Review of General Semantics, which carries the title ETC. This refers to a simple device, recommended by Korzybski, who said: you can never tell all characteristics of a given object. You can mention only a few. Therefore add always the abbreviation etc. Editor of this Review is S. I. Hayakawa, Assistant Editor is Anatol Rapoport, both of the Illinois Institute of Technology. President of the Society for General Semantics is Wendell Johnson of the State University of Iowa. Many other distinguished names are to be found in the Review and the Society.

During recent years Hayakawa published Language in Action, and Johnson published People in Quandaries. Both books are written in the style which most students will find interesting and understandable, and it is noteworthy, that right now, when I write these pages, both books are unobtainable in the bookshops, and usually in readers hands in the library. Being therefore unable to quote from these books, I shall give some sample quotations from articles, written by these and other semanticists in the ETC. Review. (93).

It should be understood, that I can only give a few quotations in this chapter, which should be considered a preview to a group of chapters in the third book. If I leave out quotations of other semanticists, it does not in any way mean, that I consider them not worthy of quotation.

From an article Linguistics and the Future by S.I. Hayakawa:

"This is neither the time nor the place to evaluate all the other work being done in semantics at the present time: by I.A. Richards and his followers in literary criticism, by P.W. Bridgman and Bertrand Russell, by Rudolf Carnap and C.W. Morris and the 'Unity of Science' group, by Jerome Frank, Thurman Arnold and E.S. Robinson in law, and by many others in many other fields, except to say that all have made extremely valuable contributions, and that no one interested in the subject can afford to leave any of them unread. Korzybski's 'non-aristotelian system' however, appears to be at once the most inclusive and the most usable of the syntheses yet produced. However difficult the demonstrations and proofs of the system to be found in Science and Sanity, the principles to which general semantics can be boiled down are simple, and can readily be taught to students or applied to one's own work."

Hayakawa has proved in his book Language in Action (94) that he can teach semantics in simple language, and I can recommend his book warmly to all students interested in semantics. The same applies to Johnson's book People in Quandaries (95). Here below are a few lines from an article by Johnson, which appeared under the same title in ETC.

"Quandaries, then, are rather like verbal cocoons, in which individuals elaborately encase themselves, and from which, under circumstances common in our time, they do not intend to hatch. The peculiar structure of these cocoons appears to be determined in great measure by the structure of the society in which they are formed - and the structure of this society has been and continues to be determined significantly by the structure of the language which we so unconsciously acquire and so unreflectively employ."

Another teacher of General Semantics is Francis P. Chisholm of Stephens College. Here are a few lines from his lectures (96). They tell conclusively, why doctors find semantics a valuable tool to correct maladjustments in patients, caused by language:

How can our formulation of a situation affect our behaviour in that situation? I refer to a very fine article by Dr. Campbell, in the Papers from the Second American Congress on General Semantics, in which he tells of a patient who came in with the complaint 'My husband makes me sick'. And she wasn't kidding either. He made her physically sick; she suffered nausea, vomiting and so on when she thought of him... She assumed the situation has a structure over which she can have no control.

Now just as soon as you make her formulate the situation in another way which has other structural implications, she can immediately begin to do something about it... As soon as she says 'react to my husband's behaviour with sickness', she has stated her sickness as a reaction, and that reaction can be judged and studied... Most human reactions are linguistically conditioned, and linguistic conditioning is very deep within us."

From an article Semantic Aspects of Language and Mathematics by Anatol Rapoport in ETC. of which I quote a few lines, related to the subject of my next chapter:

"All men are mortal', goes the first exercise in syllogism; 'Socrates is a man, therefore Socrates is mortal'.

How did we get to say 'all men are mortal?' By observing that Smith has died and Jones has died, and Krishnamurti has died, etc. If 'all men are mortal' is a certainty, then the observation must have included all men, also Socrates. If it did, there is no need to prove him mortal by the syllogism. If it did not, 'all men are mortal' is only a guess, a very good guess, to be sure, worthwhile betting on, but one which can be disproved by a single counter-example."

To end this chapter of quotations here are a few lines from Interpretation in Teaching (83) written by the grand old man of Semantics, I.A. Richards, the co-author of The Meaning of Meaning. I have again chosen a few lines about the syllogism, which will be the subject of the next chapter.

"The examples that logicians discuss are usually not instances of what they profess to be discussing - unless we agree to treat them as such, that is in a fashion quite unlike that in which we treat them in ordinary speech. For example, a logician will say (quoted from Dr. Stebbing's A Modern Introduction to Logic) that

- (1) Mussolini is mortal
- (2) Voltaire is witty
- (3) Havelock Ellis is old

express propositions of the same form. The moment we look into them and ask 'What do "mortal", "witty" and "old" mean? we see that this is flagrantly not so. In an ordinary setting,

- (1) 'is mortal' = 'will die sometime'
- (2) 'is witty' = 'makes remarks which cause, in certain people, a peculiar pleasure, and in others a peculiar annoyance'
- (3) 'is old' = 'has lived through many years'.

And with these expansions the seemingly similar adjectives stand for very different logical forms." Read also the chapter "The tricky word "is." p. 537ff.

With these few quotations I may close this chapter. My intention was to give the reader a few glimpses here and there, and to show him what exciting stuff semantics is. I hope that I have achieved my purpose: to wet the readers appetite for more.

LOGIC FOR THE PEOPLE

"Leinitz says: "I hold that the invention of the syllogism is one of the most beautiful which the human mind has made, and ever one of the most considerable. It is a kind of universal mathematics whose importance is not sufficiently known."

Betrand Russell (97)

Betrand Russell, the grand old man of Philosophy and Logic has written, together with A.N. Whitehead, a monumental work Principia Mathematics, which is one in the line of many books written by modern logicians. Their systems, their symbols, and their treatments seem to be utterly beyond the mental capabilities of the 'man in the street'. However, the teachings of logic should be general, because logical thinking is a necessity for everyone.

In the third book you are going to hear something about the propositional function of Russell. I hope to succeed in proving that this is something which could easily be taught to any boy and girl, especially if we use the symbols of semantography.

In this chapter, I want to prove that the sylllogism, an operation of mathematical logic is handled and used subconsciously by everyone of us, by any boy and girl and by any man and woman. Consequently it is necessary that everyone of us becomes consciously aware of the kind of mathematics which is going on in our minds - simply because we can perform a perfectly logical conclusion within our heads, which may turn out a fallacy. It can be proved that the malicious propaganda which has lead to the second world war, and which is, in other forms, now again threatening a world conflagration - that this propaganda is based mainly on the working of ^{the} syllogism. If we are unaware, we may become the victims of its tricks.

The syllogism was brought to perfection by the Greek philosophers. In the Greek language syllogismos means a reasoning, a reckoning all together. It usually consists of 2 statements, from which a logical conclusion is drawn. Here is the famous syllogism with which every student of logic becomes acquainted:

First statement (called first premise) All men are mortal

Second statement (called second premise) Socrates is a man

Logical conclusion Socrates is mortal

This logical conclusion may seem very natural, very logical, very true to anybody. And we might believe that the occupation with such syllogisms is a pastime restricted solely to the logicians. However, it can easily be proved that everyone of us, employs the

(444)

syllogism every day. Suppose we read a

Statement over the

entrance to a shop.....All merchandise in this shop sells for 25 ¢ a piece.

You make now an ob-

servation, stating.....Toothpaste is a merchandise in this shop.

Logical conclusion.....Toothpaste sells for 25 ¢ a piece in this shop.

Some readers, who have never heard about the syllogism, may wonder why I bring such stuff into a chapter on logic. Apparently such statements as the one above, are so natural, so obvious, that logicians seem to waste only their time, pondering about such logic which any child grasps, without being told about it.

However, such readers may become disturbed when they learn that there are syllogisms which are logically perfectly correct, yet they are factually false. In other words, we make sometimes such obviously correct logical conclusions, as the one above; we believe in the truth of our conclusion, yet we deceive ourselves.

It is quite difficult to teach logic in a few pages, and I beg forgiveness for the method I employ, which may not find agreement with readers versed in logic. On the other hand, I want to show, that semantography could be of use in the teaching of a logic, which anyone could grasp.

Let us take the following syllogism:

First statement.....Mr. Smith has £10,000 on his account.

Second statement.....A man, who has £10,000 is rich.

Logical conclusion.....Mr. Smith is rich.

Now, this is just another syllogism, of which there is nothing to be said. It's obvious, it's logical, it's true.

But, let us suppose that the first premise is not true: Mr. Smith has not £10,000. Then the logical conclusion is not true either: Mr. Smith is not rich. So we learn:

A logical conclusion is only true, when both premises are true.

Here again, some readers may find this so obvious, that to be unnecessary to stress it.

Well, let us suppose, that Mr. Smith has the £10,000 on his account. Then we have a perfect syllogism, and a perfectly logical conclusion.

Some readers may agree: "Yes, Mr. Smith is rich." But other more fortunate readers may say: "No, Mr. Smith is not rich. A man, who has only £10,000 is not rich."

So, we must realise that a perfectly logical syllogism, which leads to a perfectly logical conclusion, may be considered true by one group of people and false by another group. Where is the hitch?

Now, a student of Korzybski's General Semantics would say: "It is the 'IS' of Prediction. Mr. Smith IS rich. Whatever you say it, is - it is not! Mr. Smith is not rich."

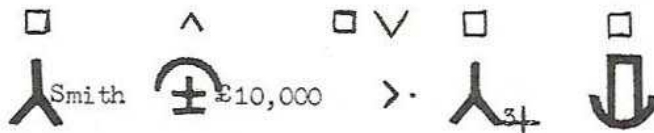
However, a student of semantography may say: "I concede that the 'is' must be watched. With safety, we can say 'Mr. Smith IS a man, Mr. Smith IS the owner of an account. But in re- gard to 'rich' the IS is only the copula (coupling link) between Mr. Smith, a THING, and an EVALUATION. The EVALUATION 'rich' is a meaning, evaluated differently in different minds. This word causes the syllogism to be considered true by one group of persons and false by another group. Look out for the EVALUATION words in any syllogism."

Another student of semantography may say: "We must watch the 'is', but we must also watch the 'has' as we learned on page 412. The 'has' may be ambiguous, the 'has' may play similar tricks as the 'is'. If Mr. Smith 'has' £10,000 does it mean, that he owns them, or that he borrowed them only? Suppose he has them, but he may have debts on other accounts.


In other words, the meaning of 'has' is vague, just as the meaning of 'is'.

So, let us examine the syllogism, arranging every word according to chemical THINGS, physical ACTIONS, and human EVALUATIONS, which include SENSE REACTIONS.


I believe to have found a simple method of analys^{ing} any syllogism, by writ^{ing} it down in the symbols of semantography. Any student, who has mastered the symbols and the system can do it, and then, he can poi^{nt} his finger at each term, which may cause disagreement between different people. Let us write the foregoing syllogism in symbols



First statement: Mr. Smith has £10,000 on his account (account s.p.255)



Second statement: a (any) man, who has £10,000 is rich (rich s.p.241)



Logical conclusion: Mr. Smith is rich

Now, let us count the real chemical THINGS which are to be found in the above statements: Mr. Smith, man, he, resp. his, who... all these words represent the human Smith. Then we have the account, which is composed of chemical matter, paper and ink lines. The meaning of £ Pound indicates also a chemical THING, be it paper (cheque or notes) or metal coins. Mathematical numbers are in a class by themselves.

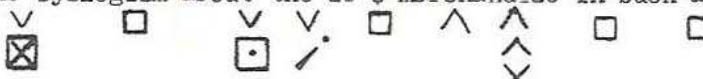
Now we come to the words, which are EVALUATIONS, relative or vague in meaning. The word a may be translated 1 (one) and falls then in the group of mathematical numbers. However, any is vague (see p. 317, anyone, anywhere, etc.). The word on, at is relative. However, the system of reference is clearly indicated on, at the account.

The verbs has and is are covered by the mind symbol. Although they are verbs they may be vague in meaning, and therefore need attention.

The last word rich is an adjective and marked as an EVALUATION word. Nevertheless, the symbol indicates clearly what is meant: earthly additions, possessions, wealth. These are chemical THINGS. However, the small multiplication mark X indicates many, a term, wholly vague in meaning. At best, it means - "more than one".

It may well be that the formal logicians, after reading the above analysis, may - as Stuart Chase wrote in regard to himself - "write me off". Nevertheless, I believe that I have found a simple method of deal^{ing} with the syllogism, and I hope to prove it with further examples in this chapter, and more elaborate^{ones} in the final^{book}.

We do not need to write the^{whole} syllogism in the symbols of semantography. We may only symbolize those meanings, which may cause disagreement. We may even put only the indicators on top. We shall now write the syllogism about the "25 c merchandise" in such a way:



First statement: All merchandise in this shop sells for 25 ¢ 1 piece.



Second statement: Toothpaste is a merchandise in this shop.

Logical conclusion: Toothpaste sells for 25 ¢ a piece in this shop.

I have not repeated the indicators on all words which are repeated in the second and third line. We can now count the words which indicate

THINGS: merchandise, shop, cents, piece (a divided thing), toothpaste.

ACTIONS: sell, for (is the shorthand word for to exchange, in exchange for, see p.302)

EVALUATIONS: in, and this do not indicate a specific THING or ACTION, they fall therefore in the third group; they are relative in meaning, and need a system of reference, which is clearly given: the shop (in this shop)

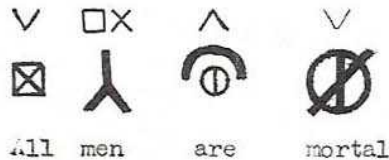
Remains the word all, which again is not the term for a specific THING or ACTION. On page 229, we learned that we must use it in a restricted sense; all is vague in meaning. Even if we do not put the mind indicator on top, we must realise, that all is a meaning in our head, which does not correspond with a specific THING or ACTION in nature.

The result of this analysis is somewhat disturbing. We should believe, that this syllogism about the 25 c merchandise is perfect. Both premises are true, the logical conclusion is therefore equally true; it's all so obviously true, that we cannot understand why the term all should cause us to suspect some hitch. We may be less sure, when we learn what E.T. Bell (74) said: "That wretched monosyllable "all" has caused mathematicians more trouble than the rest of the dictionary"., and when we read what Korzybski has to say about allness. (see quotation on page 229)

In any case, we enter the shop and look up all the merchandise there. There are lots of things on the counter and among other merchandise there is also an automatic cash register and a fine balance. Well, didn't the sign say: All merchandise in this shop sell for 25 c? The cash register and the balance are merchandise, no doubt! Well, here is twice 25 c. Send the goods to my home!"

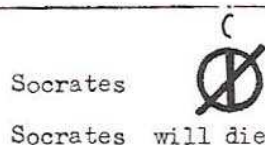
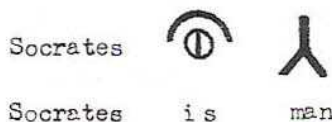
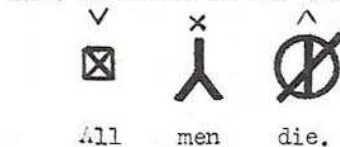
But you won't get them, and so you learn that the first premise is not true. But there in the window, there is some merchandise. You want to buy it. It is in the 25 c class, but is almost unobtainable. But you get the answer: "These are only for display purposes." So you call a policeman and he sees to it that the logic and the syllogism of the 'man in the street' is respected.

Now, you may say, that I have chosen a particular syllogism to suit semantography. Well, let's take the most classical syllogism: All men are mortal, and let us write it down in the symbols of semantography.




"Mortal" is an adjective, consequently a human EVALUATION, vague in meaning; you may say But we learned in foregoing chapters about derived adjectives, which are derived from THINGS and ACTIONS, and we should go back to the THINGS and ACTIONS. Mortal is the adjective dic-able from the ACTION to die. On page 442 we have read what I. A. Richards has to say, to propositions of such kind. Instead of mortal we must say: die, or will die.

This leaves still the vague term all. Now read the quotation on page 442, what the mathematician Rapoport has to say. We may use the term all, if no counter-example has been found. yet. It's a good guess so far, because so far as we know and have observed, men died. We may now rewrite the syllogism, assuming that we write in the time of Socrates.



The safety symbol mind over the symbol for is should remain in any such statements. It will remind us to be on our guard. In the case of Socrates, we may trust the book of history that the word S-o-c-r-a-t-e-s means a man. However, if we should be presented with a statement

Socotra  the "is" symbol should warn us
is a man ^{a person}

We never heard the word S-o-c-o-t-r-a before. Somebody, ^{a person} said it. So, we better draw the outline of that person's mind, because apparently in this person's mind Socotra "is" a man. Having been warned by our safety symbol for "is", we look up the dictionary, and find: Socotra "is not" a man, but an island in the Indian Ocean.

I am sure that formal logicians (or -so I hope - only a few of them) will be aghast at all this. They may tell me that I should go back to my retorts and my chemical analyses and should leave the analysis of words (Greek logos) in the hands of the logicians. But here exactly is the great difference between a logician and a chemist. The logician examines only the words, the chemist-physicist, however, examines the real THINGS for which the words are only symbols. A chemist therefore, will never lose sight of the fact, that any word he comes across, must represent either a chemical THING, or a physical ACTION, something real. The third group of words represent meanings in our head, they are not to be found in nature. And of course, there are mixtures and compound words, containing all three groups.

As a school boy I went to a high school, which prepared the pupils for the technical university. Consequently I did not learn Latin, Greek or Logic either. My friends from the humanist high school came to me with those logical paradoxes, that Achilles - logically - could never overtake a tortoise, ^{also} the story of the woman, her child and the crocodile, the story of Epimenides, the Cretan, who said that all Cretans are liars, and many more. At that time, I considered these paradoxes as jokes made by the Greek philosophers, but then I found that ^{some} logicians of today, (after more than 2000 years have passed) are still troubled by them and offer all kind of solutions.

First statement: Epimenides said: All Cretans are liars.

Second statement: Epimenides is a Cretan.

Logical conclusion: Epimenides is a liar

But if Epimenides is a liar, then his statement: All Cretans are liars contains Truth; it is not a Lie. But if it is not a Lie, then Epimenides is not a liar. But if his statement: All Cretans are liars is the Truth, then they are truthfully all liars. But if they are all liars, including Epimenides, then they can never tell the truth.....just think for a while in this circle, if you can, and then open up books on logic and you will get the shock of your life. All kind of solutions are offered, presented in hair-raising symbol formulae.

Well then, I may just as well offer my own solution, and call my solution the Logic of the man in the street, or the Logic of the simple people, or call it what you may - but it works. Take all words of our languages. If they do not indicate solely a chemical THING, which you can touch, or a physical ACTION of a chemical THING, then they fall in the third class: meanings in our head, actions and reactions of our senses, and especially the brain. The word all, always, never, true, false standing alone, do not indicate a particular THING or ACTION, consequently they are meanings in our head, relative, vague, different in different minds. There is only one thing we can do in such cases: go back and check up with the real THINGS. Then we will find, that human beings, including Epimenides, will sometimes tell the truth, sometimes a lie, sometimes he will believe he tells the truth, but he will ^{be} mistaken. This then is the Logic of the common man, a Logic we can teach to boys and girls, a simple Logic. And we ^{should} all be versed in Logic. It's important for our survival.

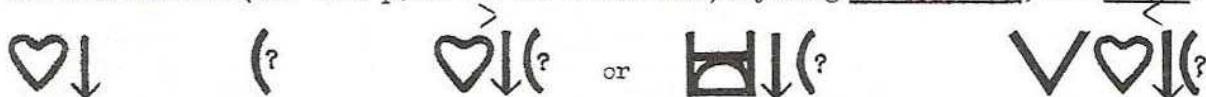
Now, you may ^{say} we don't need Logic. After all, the people of this world got along without logic, and this syllogism about the toothpaste in the 25 c. store is quite nice, but this kind of logic "comes by itself in all of us", we don't need ^{to} be taught it.

Well then, I am going to prove that we all need logic, as desperately as we need food. Perhaps we need logic even more desperately than food, because, where is the logic in rearing a child for twenty and more years, and then have it shot in a senseless war? Where is the logic in building up houses, and homes, hospitals, and universities, factories and theatres and then destroy ¹⁸⁷ these beautiful things with bombs? I am going to prove how a clever and ¹⁰⁰

industrious people of more than 80 million, the Germans, have been driven into utter madness and ruin by logical conclusions, by misdirected syllogisms presented by criminals who knew what they were doing, and by madmen, who deceived themselves and the whole nation with their logical conclusions.

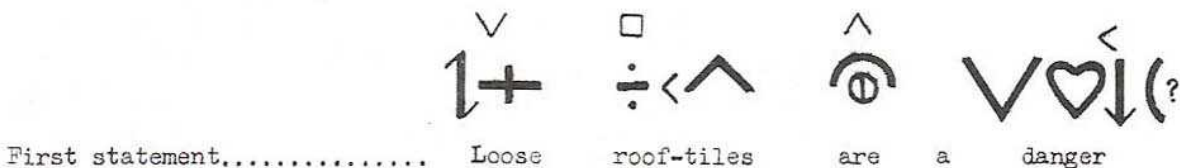
Before we examine the Nazi syllogisms in the symbols of semantography, let us examine one syllogism which contains one word, which is in the minds of most of us: Danger. The word, standing alone is, of course, only a meaning in our head, and consequently different in different minds. Some people are afraid of going out in the dark, and other people see no danger in entering a lion's cage. Well, what is the meaning of Danger?

It means being afraid, a reaction of our brain, particularly the Id portion, the Subconscious. It means being afraid of the future, the next moment. When we are afraid, our hearts are down, as to what the future holds in store for us. We can use the symbol for the Id, as indicated by the heart, or the medical symbol (402) depicting the open-closed low mind, the Subconscious. (See also p. XXI in the first book) Anything being feared, is a Danger.



Downheartedness Future to fear something (active, transitive) to fear something (medical symbol f, Subconscious) Danger <to be feared (adject. noun) big EVALUATION symbol

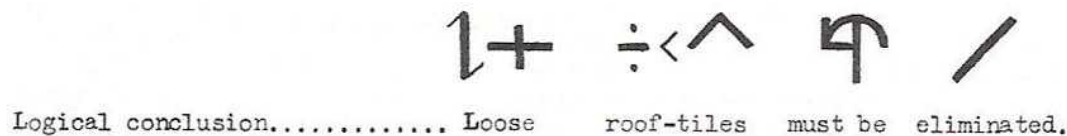
Let us now take a proposition, which occurs in daily life.



First statement..... Loose roof-tiles are a danger



Second statement..... Danger(s) must be eliminated (crossed out) (p. 276)



Logical conclusion..... Loose roof-tiles must be eliminated.

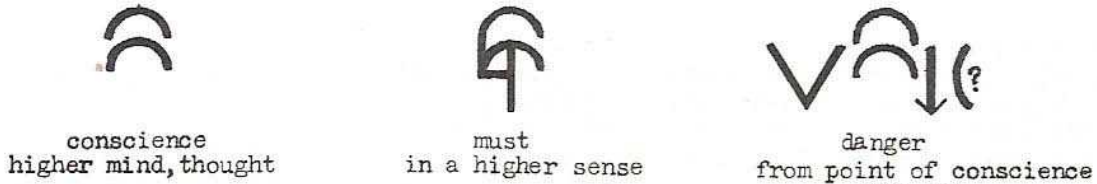
Well, this is a perfect syllogism, and a perfectly logical conclusion. Everyone may agree that this logical conclusion is "logical", stands to reason, is just "common sense", and you may believe that no argument can arise from such an obvious, sensible conclusion.

Well, let us examine our symbols, and see what heated argument they can cause.

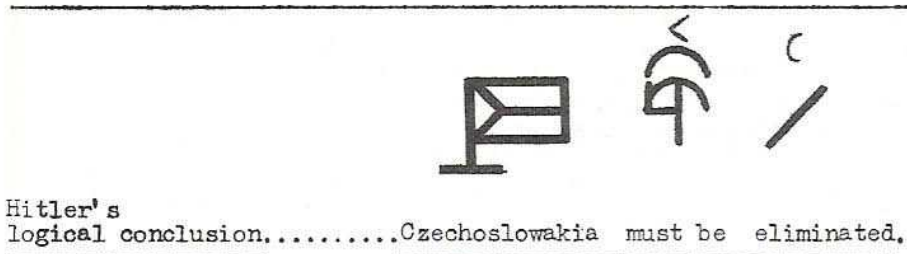
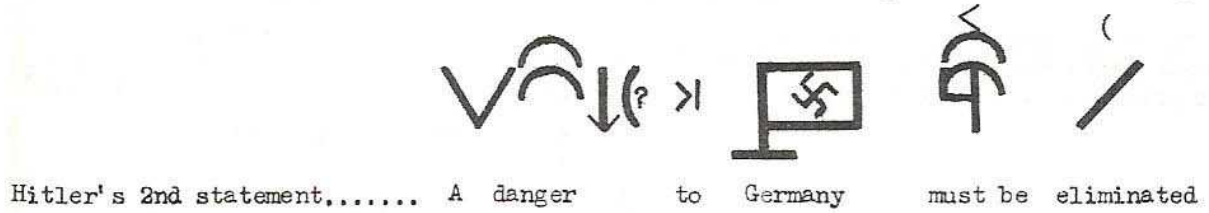
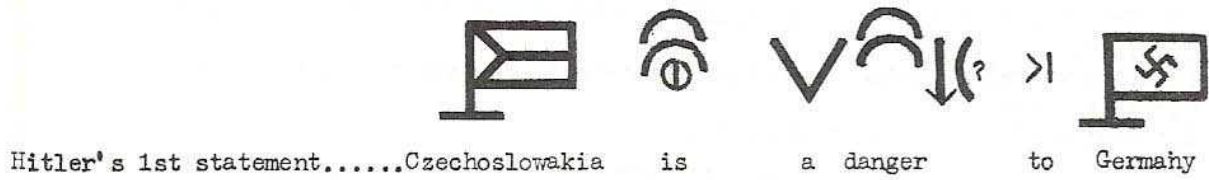
First, we have the tiles (divided parts of roof), they are real chemical THINGS, although we have not added, whether they are wooden shingles, asbestos or brick tiles. Never mind. But then we have the word loose. It's a genuine EVALUATION word, "loose" in meaning indeed. When do we consider tiles being "loose"? Shingles and asbestos tiles are nailed down. Brick tiles are just laid onto each other. No doubt, they are "loose", but are they? Builders will say no, ^{some} people, afraid of storms, will say yes. Different minds, different meaning. But let us get on to the next symbol, showing the symbols for the mind and is. In some minds, particularly the tenants', the looseness "is" a danger. In other minds, particularly the landlords', it "is not" a danger. But what is a danger? Some people are afraid to venture into a crowded street. Other people walk unperturbed beneath scaffolds of a building under construction. Apparently for their minds, there "is" no "danger". So, you see, that the first statement may contain truth or falsehood with reference to different minds.

The second statement contains the symbol for must, indicated by a mind symbol. In the minds of the tenants "it must"; in the mind of the landlord "it must not". But they are not the only minds involved. There are the building inspectors. Some are lenient, some are very stern. Two different building inspectors may come to two different verdicts.

But there are other minds who start thinking about "loose" tiles being a "danger" They are the conscientious citizens
 There might not be a danger to their lives, but they are driven on by their conscience, by a higher reasoning, superimposed on their reasoning, in a medical term their Super-Ego. With regard to them we must draw the symbol for conscience.



The reader is asked kindly to peruse foregoing chapters (pp 178) and coming chapters. And now let us write down a logical conclusion, which was actually offered by the head of a state, Adolf Hitler, as the logical reason for the elimination of a neighbour state. The great majority of the German nation found the conclusion logical and correct.

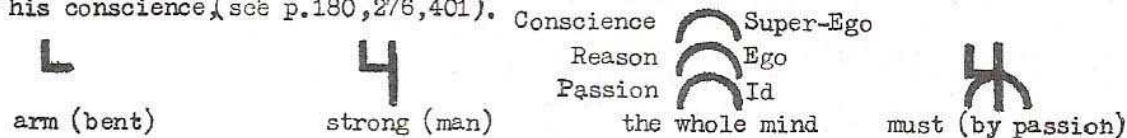


And this syllogism was offered by Hitler as the actual reason; to the Reichstag, to the German people and to the world at large in March 1939, why he ordered the invasion of what had remained of Czechoslovakia. In his mind, Czechoslovakia was a danger. In countless millions of other minds, it was not. And these other minds brought forward arguments of the chemist and physicist: that about 10 million people can't be a danger to 80 millions, that Czechoslovakia, after the rape of Austria and the Sudetenland, was almost completely surrounded by Germany, that many of its industries were now beyond its borders, etc. etc.

But it was Hitler's mind which prevailed, and to the German people his syllogism looked convincingly enough, reasonable, logical, just common sense.

Our symbol for must (force of mind) shows beneath the symbol for the mind, the symbol of the bent arm, indicating strong, physical strength, force, the force of the brute.

You may say, that Hitler was not driven by conscience, but by wild passions, impulses, instincts, emotions, etc. You may consequently draw the symbol for the Id, especially the simplified one, indicating the low mind, but Hitler was convinced that he is only driven on by his conscience (see p.180, 276, 401).



There he emerges, the "strong" man, driven on by passion; physical force above the mind. Does the symbol look, as if he would even give his salute? Turn to the next pages!

THE RAVAGES OF LANGUAGE
GERMANY - A NATION RUINED

"How was it possible that National Socialism could adopt the name of a "German Liberation Movement?" This application was the expression not only of defiant insolence, but also of a fundamental misinterpretation of the concept of liberty, that has had its effects in German history again and again.

This German concept of liberty behaved internally with an astonishing degree of lack of freedom, of immaturity, of dull servility. It was a militant slave-mentality and National Socialism went so far in its exaggeration of this incongruity between the external and internal desire for liberty as to think of world enslavement, by a people enslaved at home."

Thomas Mann (98)

"We National Socialist want good, not evil. And Adolf Hitler leads us in those aspirations.

Everything good I wanted to do for Germany will be interpreted for posterity as wicked and bad.

I always wanted to do what was right."

Reichsfuehrer SS Heinrich Himmler (99)

"Than the worst kind of German, there is nothing viler on earth; the best kind of German ranks with the best of humanity. The average German was, before Hitler's toughts had poisoned the mind of a whole generation, pretty much like the average human being."

Prof. Walter Murdoch (21)

We all know that the German nation has had its great share in the progress of mankind, that there have been great German philosophers, scientists, poets, composers, inventors, who have contributed much to civilisation. And we know for sure, that there will be no peace on earth, until the German nation has become a member of the family of nations, and is ready to co-operate with all the other nations for the benefit of humanity as a whole, instead of believing that they can oppose the other nations.

What's wrong with the Germans? Twice in one generation they have set the world aflame. Twice within one generation they have committed unspeakable crimes. They introduced poison gas against soldiers in the first world war and again poison gas for the extermination of millions of unarmed, and innocent men and women, children and babies. How was this possible?

Everyone who has been in Germany knows that the German people in general are hard-working, industrious, intelligent, and humanly honest, just as Mr. Smith, Mr. Jones and Mr. Hardy are hardworking, industrious, intelligent and humanly honest, be they citizens of Great Britain, Canada, the United States or (with other names) citizens of other countries.

Is it possible to turn these honest citizens Messrs. Smith, Jones and Hardy into insensible brutes, who will forget all decency, all ethics, and who will even commit senseless manslaughter?

Yes it is very easy. The chemist can do it. He will administer to these good citizens a fair proportion of $C_2H_5.OH$ mixed with H_2O , adding some bubbles of CO_2 , and very soon all mental barriers will break down within them. They may commit anything.

In other words, they have been drugged, and the drugs have the familiar names of Whisky, Brandy, Gin, Rum, Absinth, etc., etc.

Is there another way to bring them in such state? Yes, the doctor who is efficient in hypnosis can do it too, and without chemical drugs. He is able to influence their brain matter, chemically and physically, in a way, of which we still know little or almost nothing. We know only, that he has to speak to them. He must use words.

We know too, that ^{Some} he can hypnotise people who are awake, and we know too about posthypnotic behaviour, people, who have been given an order in the state of hypnosis, will - long after the hypnosis - execute this order, without knowing what and why they are doing it. Their brain just drives them on to obey that order, given in words.

We see therefore that words, spoken by some persons, act somehow like drugs, and affect even more powerfully the chemical brainmatter of human beings.

We know too, that mass hypnosis is an established fact. I remember vividly my great astonishment at a theatrical performance of a third rate hypnotist. I was a boy then, and there were many friends of mine in the audience. He hypnotized some of them, and they behaved just unspeakably. But then, he asked about twentyfive people onto the stage. They had to hold each other by the hands, forming a large circle. Then he told them that they cannot loosen their hand grip on each other, and they couldn't. Then he told a group of my boy friends, that they are two football teams on the field, -and there - he threw an imaginary ball among them. How they ran, how they kicked that ball, which nobody could see - and although, with eyes wide open all the time - they had not the faintest recollection what they had done, when the spell was broken and I could speak with them.

However, we know that not all persons can be hypnotized. Some will break the spell sooner or later. Some will be only partially influenced.

Now, in regard to the Germans, some people say, they are bad, wholly bad. Other people say, they are mad. Again other people say, that they have been hypnotized. In any case, we have here a whole people, whose brain matter has been somehow affected. And we know that they have been drugged, poisoned, hypnotized, influenced or call it what you may, with words, and with words alone.

And they are still affected. Today, after untold miseries, the great majority of them still believe, that Hitler was right, and that what they did was right. And the great majority of the people outside Germany believe that Hitler was wrong, and what the Germans did, was wrong.

The least we can say is, that the Germans have been confused by propaganda - by words. And we know, that the peace and the life of everyone of us, and of our children depend exactly upon the problem, whether we can clear up the confusion of words or not. We know, that the German confusion is only part of a world confusion, which affects all of us. Our neighbour ^{may} be a communist, and what he considers right, other people may consider wrong. And here again, the dispersal of the confusion, spread by words, is necessary for the survival of the human race.

I shall try now with this new tool of semantography to clear up the confusion of words. I shall show how the formulae of semantography can work just as the chemical formulae worked in clearing up the alchemist confusion - and charlatanery.

The German catastrophe will prove a testing ground. Nowhere in the history of mankind, has a nation of about 80 million people be smitten on such an unprecedented scale. And the words with which they have been driven to their ruin, are still ringing in our ears. We heard them thousands of times, spoken over the radio, and printed in the papers. We are now able to examine them with our new word chemistry - semantography. And we will try to find out, which words exerted such disastrous influences.

I hope that German readers will read the coming pages with the earnest desire to examine what I have to say. If I bring forth word examples in German, I am fully aware, that I can bring similar examples from the languages of every nation. Confusion is everywhere, and consequently misery.

In the first place, I must vindicate my symbols for good and bad, right and wrong. I must prove, that they are the symbols which fit the words. I am afraid that many "righteous" readers may have been puzzled by my symbols - to put it very mildly. The terms right and wrong seem to many people so clear, so absolute - to make them relative and vague in meaning may seem to some people - heresy and blasphemy.

But we must clear up these meanings, mustn't we? The peace of the world depends on it, and I beg all religious readers to be benevolent in their examination and to withhold final judgement, until they have studied the final chapters on the meanings of Creation, and Creator, Religion and God.

Those readers, who thumb through the pages and start reading here, are strongly advised to read the foregoing chapters on the Id, Ego, and Superego, commencing on page 161. Those readers who feel an aversion to these terms, connected with the name of Freud, are asked to substitute very familiar words for the medical terms

Emotions, feelings, passion, instinct, impulse, subconscious.. instead of.. Id
Reason, rational thought, logical thinking, etc....."....." ..Ego
Conscience, morality, ethics, etc....." ..Super-Ego

THE ABSTRACT MEANINGS OF GOOD AND BAD, RIGHT AND WRONG

I have combined the symbols for these three groups of human thought with the mathematical symbols of plus and minus.

+	-	+!	-!	♡+!	♡-!	⤴!	⤵!
plus	minus	yes!	no!	good,like	bad,dislike	good	bad
positive	negative			emotional	emotional	rational	rational

There should not be any objection against these symbols. We may like or dislike a person, without knowing why - it's just a feeling. And we may rationally examine a piece of work and say it's good or bad. And these EVALUATIONS may differ with different minds.

But how about right and wrong. Here, apparently religion comes into it, by desire ^{and is} that semantography should be accepted by all nations and all creeds. I constructed my first symbols, as follows

	combined with the symbol for religious belief in God	but I abandoned this idea quickly and adopted instead a term of Medicine, in particular Psycho-Analysis: Super-Ego		right righteousness		wrong evil
righteousness						

Had I constructed the symbol for right and wrong, bound up with the symbol for religious belief in God, it would have been the greatest blasphemy, because the worst crimes in history, recent and ancient, have been committed in the name of right and righteousness against wrong and evil. Much torture and murder, many wars and wholesale slaughters, by the right-goers in the belief that God is on their side.

So I simply had to choose a medical term, to account for the utter madness, which has been connected with the meaning of right in the history of all nations.

The symbol for the Super-Ego shows clearly another mind, a higher mind, which influences the mind of the individual. The Super-Ego is usually recognized to be the influence of the mind of the father. Every father teaches his son to do this and not to do that, and this teaching remains ingrained, and exerts a constant influence on the mind of the son. And if the father told his son time and again, that "France is our arch-enemy", this too will remain and exert an influence sooner or later. Other minds will superimpose themselves on the mind of the individual, the teaching of the mother, of the minister, of Erasmus, Spinoza, and in the end we may assume that the influence comes from God himself.

On the other hand, the influence may come from a political leader. Right will mean what he considers right. Wrong will mean, what he rejects as wrong.

This influence by a superior mind is very simply indicated by the second mind symbol. This, of course makes both meanings relative, vague and different from one mind to the other. And in fact, what one mind considers right, the other rejects as wrong.

Many political leaders have felt this vagueness in their meaning of right and wrong and sure enough, they have bound it up with the religious symbol for belief in God. After all, the boys, who are to become later storm troopers, have been reared to believe in God. So the symbol of the Cross was somehow retained in the symbol for various political parties.

Hakenkreuz hooked cross Nazi-Germany	hammer cross Christian Anti-Nazi party in Austria	Croix de Feu cross of fire rightist party France, Belgium	Arrow Cross rightist pt. in Hungary	Fiery Cross Ku Klux Klan in U.S.A.	General de Gaulle's rightist party in France

Note, that the German word Haken "Kreuz" ^(Cross) was always maintained. The term Swastika is unknown in Germany. In Italy, the Pope exerted a strong political opposition. Mussolini chose the symbol for right and just from the glorious Roman time, the symbol of the fascis (a bundle of rods with an ax) which was carried before the Roman judges.

It is interesting to note that the meaning of right and just is expressed by the same word for the right side (against the left). It may well be, that the predominance of the right arm in human activities (better and stronger than the left arm) has something to do with it. We find the same word for right and Right in many languages.

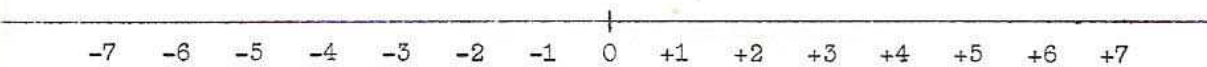
In parliament, the opposition party, the rebels, who oppose the "right" order of things are deliberately placed on the left benches. The terms rightist and leftist are used in many languages, and in these language, the term rightist exerts a subtle persuasion, not to be overlooked.

The earlier socialist parties chose the symbol of the miners, the crossed hammers, and even the communists crossed their symbols of hammer and sickle, although they would have made a much better picture standing upright side by side.

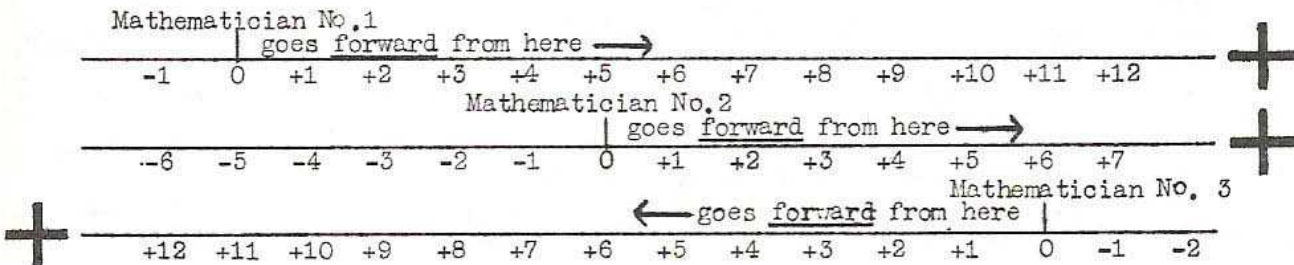
Writing the term upright I notice that it contains too the term right. An upright man, standing upright (and not bowing) is usually synonymous with a right man. The same synonym exists in German: aufrecht and recht. In French we have the same word droit for upright, straight, right and righteous.

In regard to ^{the} symbol for right and righteous, I believe to have vindicated the use of the medical term for conscience instead of a religious symbol (which we shall evolve in a later chapter). I want now to show, that the mathematical symbols for plus and minus have a "deeper" meaning than just to express only yes and no. It is of significance that Descartes, the great mathematician, who evolved the principles of geometrical mathematics proposed the idea of an international language, and that his follower, the great Pascal, stressed the dependence ^{between} / word meanings and geometrical meanings. A few diagrams will make this clear.

If a mathematician draws a line and chooses a point on this line, this position is wholly relative in itself, but it may be used as a system of reference from which he can measure.



You see at a glance, that the mathematician may choose any point on the line as his Zero, and he is even free to put the plus numbers on the left, instead of the right. Let us suppose three mathematicians, each choosing a different system of reference.



We see that mathematician no.1 and no.2 go forward in their counting in the same direction, whereas mathematician no.3 goes forward in his counting in the opposite direction.

We see too at a glance, that the meanings of all three mathematicians will differ. Each of them may consider his system of reference as the correct one, and may, (if unaware of the different ^{points/wonder} starting/ how the other two got completely different figures.

You see too, that mathematicians no.1 and no.2 may easier come to an agreement, because they both count in the same direction, but agreement with the no.3 man may be difficult.

Now, all this above is depicted in the "language" of geometry and mathematics, and you can see at a glance, where the differences are, because the "language" of geometry and mathematics is "clearer" than phonetic language, in which we thresh out our mental differences. But the analogy will help you to understand what I want to say:

If two minds think in the same direction, but differ only in their starting point, they may come soon to an agreement. They would say: "Our difference is only in degree but we have the same aim."

However, after heated arguments with the third mind, they may give up and say to him: "We differ in principles. Our aims are in opposite directions."

Now we shall apply this kind of reckoning to some human arguments. As we know, minds differ little in regard to definite chemical THINGS or physical ACTIONS. ^{The word} / ^{man} will mean a/THING for 3 different minds, and ^{the words} / ^{man} earning money will mean an ACTION for all 3 of them, but the meaning of rich will be evaluated differently by each of them.

The EVALUATION of "RICH"

The line of money earning

+ Ascet -	Zero	- Worker +	- Nabob +
	0		
living in abject poverty from alms		small earnings	large earnings
<u>The Ascet says:</u> "RICH means for me to reject the principle: money earning. the less I have, the richer I am."		<u>The Worker says:</u> "RICH means for me to earn at least £1000 per year."	<u>The Nabob says:</u> "RICH means earning at least £100,000 a year".

You see at a glance that the marks + and - are reversed in the case of the Ascet. Whereas the worker and the nabob may come to an agreement about the EVALUATION of the meaning of RICH, the case is hopeless with the Ascet. Endless debates will bring no agreement. They think in different directions. What means good for the worker and the nabob, means bad for the ascet.

The EVALUATION of "PITY AND CHARITY"

The line of giving money away

+ Misanthrope -	Zero	- Average man +	- Philanthropist +
	0		
The Misanthrope says: "Pity and Charity is <u>wrong!</u> " "I give nothing!" "I take, where I can take,"		The average man says: "Pity and Charity is <u>right!</u> " "I give occasionally".	The Philanthropist says: "Pity and Charity is <u>right!</u> " "I give 50% of my earnings".

Again the average man and the philanthropist will not convince the misanthrope, no matter how hard they argue.

But why does the misanthrope think that way? He is usually a clever man, with many interests; you can reason with him. He is open to logical argument.

Then you will discover that he has reasoned it out. His conviction is based on perfectly logical arguments. The mental calculus, the syllogism, ^{may have} worked as follows:

First premise.....Laziness brings little earnings.

Second premise.....Poor people make little earnings.

Logical conclusion.....Poor people are lazy.

And lazy people should not be supported. That means only fostering their laziness. Just think how many reasonable men and women think that way. It may take you a terrific effort to convince them otherwise. And you wouldn't be able to do it with arguments only; you would have to drag them into the slums, go into the houses of the poor, inquire about their earnings, their hours of work, the strenuousness of their work, etc, etc, until they may discard their syllogism, or find another one.

The reader may discover, that - although I brought meanings of human EVALUATION into play - I still based all reasoning on real THINGS, hard cash, which can buy other THINGS. When, however, we consider the attitudes of different people in regard to meanings which are wholly based on EVALUATIONS of our SENSES (with no ^{money counting} mathematics, etc.) then their EVALUATIONS as to right and wrong will be wholly relative, and vague.

 !
good
right

We learn from this, that our symbols for good and bad, right and wrong indicate relative and vague meanings. Even the mathematical symbols for plus + and minus - are relative and vague and depend in which direction people think and count.

 !
bad
wrong

From the foregoing chapter on logic, we know why the syllogism of the misanthrope - although being perfect from the point of logic - is incorrect from the point of physics. It contains two EVALUATION words lazy and poor, both vague in meaning, and consequently the syllogism is vague. In reality, it may apply to a few hoboes, but it is usually incorrect in regard to the great mass of the people, struggling hard to make a living.

Now, let us take Hitler's syllogism, which convinced the German people that the rape of Czechoslovakia was necessary and therefore right.

Hitler's first premise.....Czechoslovakia is a <u>danger</u> to Germany	see the symbols on page 449
Hitler's second premise.....A <u>danger</u> to Germany must be eliminated	

Hitler's logical conclusion.....Czechoslovakia must be eliminated

Now we shall learn something more about the syllogism. Most syllogisms have a so-called middle term, which appears in both premises. In the syllogism above, the middle term is DANGER. And in most syllogisms, the middle term disappears in the logical conclusion. When Hitler reached his decision: Czechoslovakia must be eliminated it did not contain that vague evaluation word Danger any more. It was now clear to the point; it contained now only words of ACTION towards THINGS. And consequently he gave his orders to the commanders of the German forces, to take ACTION.

So you see, Hitler had to repeat the term danger, Danger, DANGER, D A N G E R..... again and again, until all minds of the German people were filled with it, and reacted accordingly. Then the logical conclusion came almost as a relief: Yes, Hitler is right. Czechoslovakia must be eliminated." And the meaning of Danger disappeared in the calculus.

Actually, Hitler did not tell a lie. Czechoslovakia was a danger to Germany, whereas the South Pole territory was not. ^{A small piece of glass is a danger too.} The question is only: how much and under what circumstances. From the point of peaceful co-operation, international trade, cultural exchange, etc. etc. Czechoslovakia was not a danger to Germany. On the contrary. And the British, and the French, the Poles and the Jews were not dangers to Germany, but if you repeat statements with vague EVALUATION terms again and again, people will in the end believe them.

The world stood aghast at the unspeakable crimes of the concentration camps, of the gassing of millions of innocent men and women, old people, children and babies. Why did they do it? Some people said: the Germans are maniacs, suffer from paranoia. Other people said: The Germans are sadists, sexually perverted. But few people suggested, that the Germans did all this by clear, logical thinking. There are some mad people in German asylums, there are sadists among them, just as they are in other nations, and we have to take them into account, in regard of the direction of their thinking

A "decent German chap" thinks \rightarrow "Kindness to people brings pleasure." \rightarrow
 \leftarrow "Torture to people brings pleasure" \leftarrow thinks a German sadist.

There is no reconciliation possible between these diametrically opposed convictions. In regard to the sadist, it is a matter for the medical man, the psychiatrist. But everyone who has been in Germany, knows that the average German is just as kindhearted, honest and intelligent, as the average citizen of other nations. So where is the mystery?

Misapplied reasoning. Applications of vague terms. Perfect logical conclusions, but without awareness of the vagueness of the meanings employed. In short: Language, without the knowledge of Semantics.

First premise....Jews (incl. Babies), Poles, Russians, Czechs, French, British and other people around, are a DANGER to Germany.

Second premise.....A DANGER to Germany must be eliminated.

Logical conclusion: ...Jews (incl. Babies) Poles, Russians, Czechs, etc. must be eliminated.

And so in "clear, logical thought" and "cold blood" bricks, cement, pipes, gas, etc. were ordered for the gas chambers, and in due course they were put into operation.

THE FUEHRER IS ALWAYS RIGHT, SAID THE RIGHTEOUS NAZIS

The war records have brought to light, that the Gestapo, the SS and the SD, the German military police have shot many thousands of German soldiers, besides the hundred of thousands Germans who died in the concentration camps. Not all Germans fell prey to this kind of thinking.

But others fell prey and ordered and were ordered about to do the killing. What were the thoughts of the "decent" ones?

The mind of an average German (not a sadist) ordered to work at the gas chambers of the concentration camps of Germany.

- Conscience: ☺ "The Fuehrer said they are a danger, and the Fuehrer is always right."
- Reason: ☺ "I wish I were somewhere else. But if I desert my post, I will be shot."
- Emotion: ☺ "I can't stand any more this heartbreaking crying of those children."

Well, this is the mildest case. It does not take into account the countless sadists, and amateur sadists.

But now, the war is over, Germany is in ruins, the German people in utter misery. Have they recognized their mistakes and their false thinking?

Not at all. Reports of oversea correspondents from Germany tally so far, that up to 80% of inquired people still believe that Hitler was right. And the other 20%? Well, they might tell you anything, when they have reason to believe, that a pack of cigarettes, or chocolate will come out in the end.

Yes, we must face the bitter fact, that the Germans have not learned by their mistakes. On the contrary. They are not in the least sorry for what they did.

How did they reason it out this time? Again a perfect logical calculation:

First premise.....Hitler said: "I believe to be right in warning of the danger that the British, French, Czechs, Russians, etc., etc., want to destroy Germany."

Second premise.....They did destroy Germany

Logical conclusion.....Hitler was right

So what to do with the Germans? Sooner or later a new Schickelgruber will arise, and will set the world aflame again. Just writing these lines - today is the 12th November 1948 - yesterday was Armistice Day - I hear over the radio, that the Ruhr was given back to German control, against the violent protest of the French government. They know what this means: Guns and more guns in some not too distant future.

In 1920 a cartoon appeared in the German magazine "Jugend". It showed the naked, hungry, destitute German Michel (The equivalent to the British John Bull or Uncle Sam) standing before the abyss of German ruin. Behind him a mass of German and foreign generals, statesmen, economists, authors, etc. all with a book in their hands and all saying: "Read my memoirs, then you will know why you got into this mess."

And the same happened again after 1945. Innumerable books appeared, many full of words as to what to do with Germany? Most tally in so far, as they propose "Education", but what kind of Education? American Democracy, British Democracy, French Democracy or Russian Democracy, with all their bitter failings?

I am not going to make myself ridiculous in offering another book to this question. I feel that with the present German generation, the case is almost hopeless. May be, if a new generation is born and grows up under different teachers and different teachings... You have read now more than 450 pages of this symbol writing. The writings in these pages, should serve ^{one purpose: the practicability of} to prove the system of semantography. The German propaganda stuff is still ringing in our ears, and the readers may see for themselves, whether semantography could really "demask" meanings, which can and did confuse a nation and a whole world. And I want to prove, that this semantography can be taught to children.

Imagine a teacher in a small village, who owns also the small store. If he teaches the children $1 + 2 = 3$, he can't later on deceive them with a false calculation in his store. And I believe that a teacher, teaching semantics, can't later on say to his children: Hitler was always right. They would find the error in such a calculation.

Hitler is attributed with having said: the bigger the lie, the more will the people believe it. Well, let's write down a few very big lies, and see whether the Germans would have swallowed them. But - let's form these lies according to the word groups of semantography:

Word group

very big lies

□
chemical THING.....In Germany, the mountains consist of gold

^
physical ACTION.....In Germany, waters run up the mountains.

⌞
Space.....Germany is a continent by itself, surrounded by water.

ⓐ
Time.....In Germany, a day has 25 hours.

123
Numbers..... 2 + 2 = 5 ,according to German mathematics

Well, these are very big lies indeed, and accordingly, if repeated a million times and more, the German people would believe them. But would they? They would not.

The reader guesses already the group of words, which the Germans swallowed:

∨
EVALUATION
adjectives, etc.



EVALUATION words, including the words pertaining to the EVALUATIONS (REACTIONS) of the human SENSES. Such words are symbolized by the symbols of the human SENSES.

∨
big EVALUATION (noun)

○ ∩ ∩ ♥ ☐ 7 ⊙ ∟ ∨
speech reason conscience emotion, subconscious hearing vision smell touch

And now to a few samples, and the reader, versed in semantography, may apply it to some slogans of some political parties in his own country. It would work just as well.

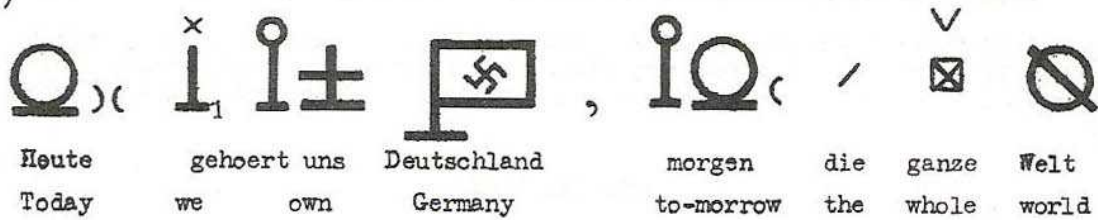
SOME NAZI SLOGANS TRANSLATED INTO SEMANTOGRAPHY

	
Deutschland	erwache !
Germany	wake up !

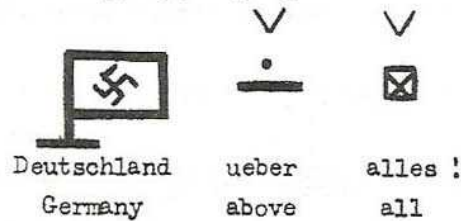
To tell a sleeping person to wake up, makes sense. But to tell 70 million awake Germans that they are actually sleeping, is a lie. Used in a metaphor (mouth symbol, figure of speech) and pertaining to the senses, it had some vague meaning. Repeated millions of times for 14 years, since 1920, the Germans believed in the end, that they are sleeping somehow, and had to wake up. At last in 1933 they were officially declared of having waked up, and the first thousand years of the Third Reich could start.

The flag symbol shows the three stripes of the Weimar Republic and the initial D. (p. 348) In the following lines written in semantography, no special explanation will be given as to the construction of the symbol compounds. I assume that the reader has full knowledge of the contents of the foregoing chapters. Other readers may look out for the small EVALUATION indicator ∨ or the big one ∨ and for the symbols of the senses, contained in the symbol compounds.

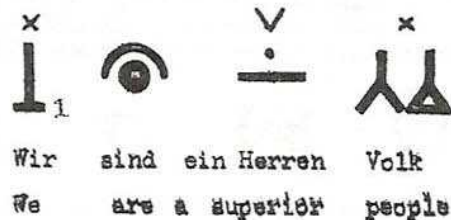
SOME NAZI SLOGANS TRANSLATED INTO SEMANTOGRAPHY



When those millions of singing boys, who did not even own the pants, which their parents bought them, sang again and again that they are the owners of Germany, they never realised that they use a metaphor. "Today" meant now, today, the "to-morrow", however, was a metaphor again. And that they will own to-morrow the whole world was intoxicating enough. When they were called up to arms, they knew that now the time has come at last. And the big lie did work. They went readily and happily, singing:



Three words and two EVALUATION terms in them, ^{together} are so vague in meaning as to mean almost anything. You will find a detailed analysis of this slogan, and of the implications of the symbols in the chapter on page 145 of this second edition.



It should be noted, that Herr, Master, Superior is written in semantography . If they are a superior people, the drawing of the line makes only sense, if there are inferior people, the Poles for instances, or the Ukrainians, the Slavs . Now ask a Pole, what he thinks of the Germans, and he will tell you, that they are sub-humans . It just depends who draws the line and where.

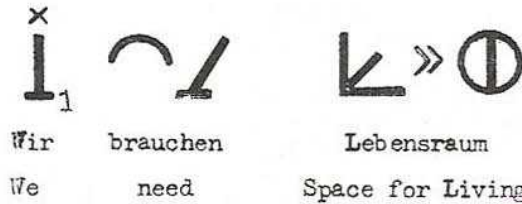
It may well be that many readers would not agree with such conclusions. "After all", they might say, "some persons are "sub-human", from whatever standards you measure. The statement that "sub-human" is a very vague meaning leads us nowhere"

I agree with this opinion and I beg those readers to withhold final judgement, until they have read a later chapter, titled "The Units of Ethics". What is said there in detail, can be said in a few words.

We have seen that we can find agreement in regard to the adjectives "long" and "short" by applying a yardstick. However, we must first agree about our yardstick. Some people have agreed to use the "inch" as the unit of length. Other people have agreed to use the "centimeter". However, both have agreed about a fixed relationship between both units.

Similarly, we may agree about some units in regard to the meaning "human" and "sub-human". The unit might be 1 "human"; that means 1 "human life". As we are here to live and not to kill each other, we may agree that a human, who kills another human, should be placed below the line, which we may name "humanity". Then a killer is to be declared "sub-human". Such a standard is already set in the so-called "civilized" countries.

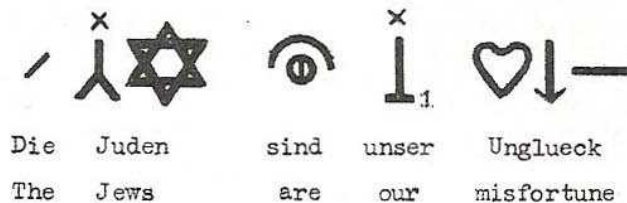
Having set this standard we may go on, and declare that war is "sub-human". This again has been done long ago, and we find today an ever growing consciousness in the minds of the people, about the meaning of "agression"; which means: starting the sub-human activity "war".



Space notions without measurements, ^{are relative,} Living space can be exactly defined by medical experiments. A human being needs so many cubic feet of air per hour, etc. etc. So what is the minimum of living space, and do the Germans have or have not this minimum? In the winter of 1938-1939 the ten thousands of Jews caught at random on the 10th of November 1938 ^{at Buchenwald} were given sleeping quarters in 5 shelves, each one having a space less than in a coffin. Yet most of them lived through. So what is Living Space? Once such a slogan is repeated million of times through many years, the people start to believe it. Soon their mind is pervaded by this thought and they feel somehow choked, for want of living space. When this state of mind is reached, it is of no use to point out to them, that the people in Belgium have only a tenth of the living space of the Germans. The majority of Germans believe then that they need (a meaning in their heads) living space, and a convenient syllogism furnishes them with the answer where to get it. Superior people need more living space than inferior ones. So the Poles and the Ukrainians would have to give up some of their space.

We see how one slogan supports the other, and works in such logical conclusions.

Once the fact is established that there are superior and inferior people, it is easy to find people more inferior than others.

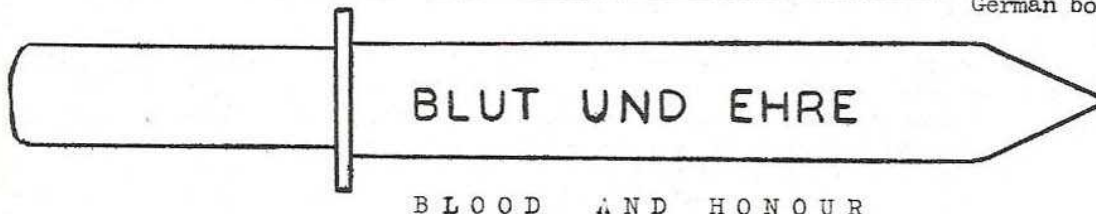


The Nazis had indeed a hard job to convince the German people that the Jews are inferior. Almost every German has been at school with some Jews and knew that most of them are just the same fellows as he and others. They knew too, that many Jews have distinguished themselves as scientists, discoverers, inventors, Nobel prize winners, builders of industries, and he knew too from personal experiences that the Jews felt as patriotic Germans. More than 12,000 died a soldier's death on the battlefields of the first world war. No doubt, most of them have been a great plus for Germany, not a minus.

The Nazis could have invented very big lies; that the Jews are not scientists, not inventors, not Nobel prize winners, etc. These would have been big lies indeed, but they would not have been believed, even if repeated a million times. However, a statement, referring to a human EVALUATION, a vague feeling somewhere in the Subconscious: The Jews are our misfortune, could be repeated until it was believed. What is a misfortune? Unglueck means in German even more misery than misfortune. What is misery, and when does a person feel to be miserable or to feel unfortunate? Tell a susceptible person every day, that she feels miserable, and in the end she will feel miserable.

Such are the big lies, which the Nazis spread. Statements concerning vague EVALUATIONS, vague feelings, and reactions of our brain matter, they were repeated millions of times until the Germans felt that way. They were masters in the invention of such statements. Look what they did with the German Youth. Everyone got a dagger with an inscription:

The dagger, given to every boy in the Hitler Youth (compulsory for all German boys)



On the other side of the dagger was engraved the name of the leader of the SA Ernst Roehm, but when he was purged in 1934, all boys had to give up their daggers and got it back later on, with the name of Roehm ground out.

But then, there was that trunk, the rest of Czechoslovakia, protruding like a thorn into the flesh of Germany. He had no territorial claims, to be sure, but there were security claims, very urgent, very important. He had to protect the German people.

Then came Poland. He had no territorial claims, but it was reported that the Poles started to shoot first, at least this was what Goebbels said. So there were now claims of self-defence.

Humanitarian, national, security, etc. what vague meanings! Everyone evaluated such words differently. ^{And so the German nation} believed in each case, that Hitler had not violated former promises. Why, these were different cases altogether.

So the war started, and now the German military commanders took over. They were well versed in warfare. Let us have a look at their language, which they used already in the first world war and earlier.

THE LINGUIST - PSYCHOLOGISTS IN THE GERMAN WAR MINISTRY

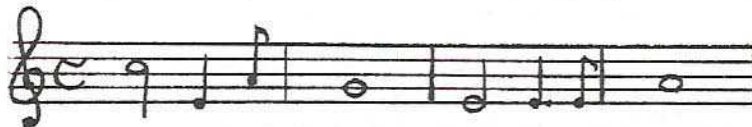
In the U.S.A., Great Britain, etc. the term army (U.S. Army) stems from arms, weapons. In Germany however, the term is Wehrmacht. The German verb wehren, sich wehren means solely defending oneself. So Wehrmacht is to be translated Defense Might. Meanwhile other countries have followed this convenient term, and have now a Defense Ministry, instead of a War Ministry. Subconsciously, such terms work in the people's minds.

Now wehren is a verb, an ACTION word, and according to our analysis (see pp. 219 ff, we can usually form the UNIT of ACTION word, which is wehr. Again, this word has that dual aspect of being an ENERGY-MASS word. It stands for an ACTION and also for a THING. Wehr means also a chemical THING, a wall, for instance, of a fort. In English we derive from to battle, the UNIT of ACTION word battle, and the MASS word battle-ment (like advertise-ment), which means a wall of a fort. The similar German word, however, circumvents the straightforward term battle, but uses instead wehr, indicating solely defence.

Now we have a similar word in English with a prefix: em-battle. In the German language, the prefix ge- is used to indicate the MASS word, derived from an ACTION word. For instance, there is the verb rollen, meaning to roll, rolling, and Ge-rolle, or Ge-rölle means the THINGS, which roll; for instance, the stones rolling down a mountain are called Ge-rolle.

So, if we take the German word wehr and put the THING prefix ge- before it, we get: Ge-wehr, which means a THING solely for defence. However, it actually does not mean a wall, or a shield, but it means a rifle, which, as we know, can be used for offence too.

The term Ge-wehr is comparatively new. There are older terms, Muskete, Karabiner, Buechse, etc. For anyone, who studied German military terms, and especially the daily bulletins of the German High Command, there cannot be any doubt, that such terms are carefully thought out.



Volk ans Ge- we h r , Volk ans Ge- we h r

Refrain of the choral, which preceded announcements of the German High Command in the second world war, 1939 - 1945

Note, that the prefix syllable Ge is very short in the music and that the long drawn-out we h r is eight times as long. The resultant meaning, influenced by the long wehr was: People to the Defence.

But the German military linguists performed other, more amazing feats. Believe ^{it} or not there is no equivalent term in the German language for the meaning of

to invade

According to Webster (28) the meaning in the English language is very clear and to the point: to enter with hostile intention; to enter with a view to conquest or plunder; to make an irruption into; as, the Romans invaded Britain. To infringe, or encroach on; to violate; as, the king invaded the rights of the people. To grow and spread over; to affect injuriously and progressively; as, gangrene invades healthy tissue. To enter intrusively, as ore deposits in rocks. To attack; assault. To go into or upon; to pass within the confines of. To enter. To usurp.

These are all the meanings listed in the Webster's dictionary under the heading of to invade, and there should not be any doubt in anybody as to the meaning of this term.

GERMAN GENERALS CANNOT INVADE. THEY HAVE NO WORD FOR IT

Consequently the symbolization of to invade is done as follows:



war



attack, offense



defense



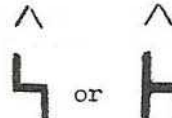
to invade
to attack and penetrate
into a country by force

But, search as you may, the Germans have no adequate term for the meaning of to invade and consequently they do not invade countries. The terms used by the High Command and the newspapers are ridiculously harmless, and they look so the more, if depicted in the actual meaning of the German words.



einmarschieren

to march into



(sitting down)

besetzen

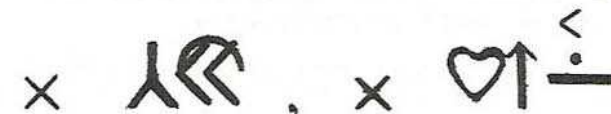
to be-seat

When the German buerger read in his paper that "the Einmarsch in Belgium proceeded according to plan", he could not have the impression of the burning of villages, shooting of hostages, devastation on a large scale. For him, the word Einmarsch suggested only the colourful display of military might, singing troops and, of course, the military brass band. When he read, that the German troops have besetzt Belgium, again the word indicated only that the German soldiers were just sitting there.

The word Invasion is known in the German language, but they never used it for their military offensive operations. Although they have made many verbs from foreign words, such as Sterilisation, sterilisieren, they never formed invasieren or invadieren. They used only the harmless words to march into and to be-seat. The effects are not to be overlooked. After the first world war, and now after the second world war, the majority of the German people dismiss^{ed} the accounts of the barbaric behaviour of German troops in foreign countries, as just atrocity-propaganda (Greuel Propaganda), being just lies of the enemies of Germany. They, the German people, never^{ed} heard of all this. They have no word which could give them an idea of the meaning to invade.

When, in 1944 the allied invasion was imminent, Goebbels invented a new word Der Invasor. This foreign word with its unfamiliar sound gave them an uneasy feeling, and Goebbels, in telling them, that the Invasor is intending to take away from them what they hold, he made them hate the very word. To give them some assurance of their safety, he invented another word Festung Europa, Fortress Europe. The very word Festung led the Germans imagine all kind of crenell^{ed} towers, moats, and battlements, behind which they are safe.

In the first world war, the average German was dazed about the fact, that the whole world rose in hostility to him. He thought he had a lot of friends, and now he had to fight on many fronts. So the military psychologists invented a new slogan.



Viel Feind , viel Ehr'.

Many enemies , many honours.

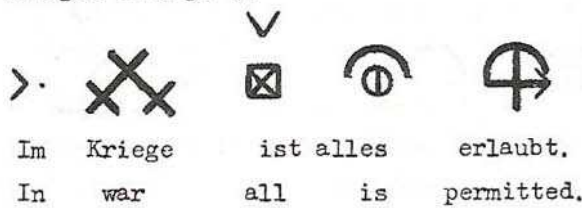
What a big lie, contrary not only to all religion, all ethics, but contrary to all common sense. How could the Germans swallow such nonsense? The explanation may be found in the fact, that the Germans are very romantic. The glorious time of German history was the age of the knights. Shining armour, colourful banners, castles and fair maidens on the balcony, looking down at the tournament. etc. etc. The mad Leopold II. King of Bavaria built expensive mediaval castles in our time, with as many crenellated towers and lookouts as could be perched on a picturesque hill.

Apparently, when the Germans were given the slogan Many enemies, many honours, they ^{to swallow} may have pictured themselves as those vagrant knights, who roamed the countries and started a squabble with any other knight who happened to come across.

The soldiers, and especially the young ones, were perturbed by what they saw and what they had to do on the front. Requisitioning property, burning and destroying villages and houses, shooting hostages or civilians who tried to defend themselves, etc. etc. Their mind had to be set at rest and so another slogan was introduced,








The statement as it stands means nonsense; but what a good example of what the "is" can do in a mind. War is War, and this is all there is to it. When the Germans introduced poison gas warfare in 1917, it was a "bit thick" to explain. So a new slogan was brought into play.



We all like colours, and German militarists have used colour and symbols to cover up dreadful meanings. The different poison gas grenades were marked with crosses in different colours. They were consequently not called by its proper name Giftgas Granate, but by its colour.







German colour symbols and names for poison gas grenades in world war I.

Paint:	yellow	blue	green	yellow & blue
				 
	Gelbkreuz Granate	Blaukreuz Granate	Gruenkreuz Granate	Bunt Schiessen
	yellow-cross gren.	blue-cross grenade	green-cross grenade	Coloured Shooting

Now, we may say there is nothing wrong in using symbols to distinguish between different shells. However, the influence of those nice colours can be seen in a horrifying term: Bunt Schiessen. Blue cross poison gas, was not deadly, but it could penetrate the gas masks, and choke the man. He invariably tore off the gas mask, to breath freely. But the Germans shot. yellow cross grenades simultaneously. The victim without the gas mask inhaled the yellow cross poison gas, which was mustard gas, and which killed with horrible effects. For this shooting of two different grenades simultaneously, the term Bunt Schiessen was invented, which may be translated Bunting Shooting (to give you the flavour) and correctly Shooting in many colours. How harmless!

That the Germans like colours, and many colours can be proved by another example. In a prison, a prisoner carries a number, with no indication for what crime he is held. But not so in the German concentration camps. There was much bunting there.

Colour symbols in the German concentration camps

Colour:	red	green	ruby	black outline	yellow	yellow
						
	political prisoner	criminal	Bible student Jehovah's witness	race disgracer "aryan"	Jew	Jewish
					with no other political crime than being Jewish	race disgracer




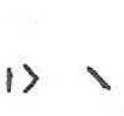


There is a tragi-comedy in the design of these symbols. Before 1938 they were in

(464)

circles, sewed on the right outside of the trouser and on the left side of the chest. Then came 1938 and the mass arrest of Jews; caught in the street, in public places, homes, etc. and sent to Dachau, Buchenwald, Sachsenhausen, etc. There the problem arose, how to symbolize them. Of course, the star of David was a fine geometrical symbol, but how to distinguish between various offenders. Then they hit on the idea of combining two colours in the star of David, and consequently all the "aryan" prisoners got new triangle patches instead of circles, and the Jews got an additional triangle. Colour mixed with terror and horror. Besides the examples shown on the foregoing page, there were other offences in other colours - but brown was exempted, the colour of the Nazi uniform.

The newspaper readers of every nation refused to believe the gruesome stories told about the concentration camps. The German people too refused to believe them. Such wholesale terror could not have been committed by human beings. Yet, the innumerable trials, the pictures, the films proved to the world that all this did really happen, that approximately 7,000,000 people of many nationalities were killed off in the most gruesome way.

Now the Germans had to believe it. How could they bear such terrible guilt? The old medicine helped again: a new slogan.

					
Das Toeten	war	notwendig	in einem hoeheren	Sinne	
The killing	was	necessary	in a "higher	sense"	

What a nice, merciful piece of slogan! It covers up all the terrible meanings involved. It is very suitable to cover up the shame and the guilt which must fill the mind of every German. And the most amazing thing is, that each German can "tailor" it to fit his mind. The human EVALUATION words "necessary" in a "higher sense" will be interpreted by each German mind differently. The rogue and the tough will find their suitable interpretation, and so on up to the former Nazi doctor and biologist. For them the words would have quite different meanings. Now, they could go and lie down for a peaceful slumber. Their minds have been put at rest by the above slogan. The matter of the concentration camps/horror has been settled comfortably: "It was necessary in a higher sense!"

But actually the above translation of the German words into English is not correct. And here we have an excellent example to see how difficult, sometimes almost impossible, it is to translate human EVALUATION words from one language into another, simply because the words have different meanings for the natives in the original language, and they have consequently different meanings for the translator, and for those who read the translation.

We may safely assume that a great many terms for THINGS and ACTIONS as for instance: horse and stone, run and fall may remain for centuries in the dictionary, having the same meaning, and being translated into another language, where again their meaning will not change. But words of human EVALUATIONS, especially sense and mind reactions - they change incessantly. To appease meant before 1938, according to the dictionary to pacify. After Munich, the meaning changed completely, but again it differed in different minds. Many people are still of the opinion that Chamberlain did appease Hitler in the former sense of the word: to pacify. The war was put off for one year and this saved Britain. Other minds interpret the word differently, and maintain, that "appeasement" towards Germany and Japan should have stopped in 1931 and earlier. The war could have been avoided. So, what does "appeasement" really mean?

In the above German slogan, we have the words: in einem hoeheren Sinne. Now the German Sinn means according to a German-English dictionary sense, intellect, mind, opinion, taste, liking, tendency, wish, import, meaning, high-mindedness and some more. Choose your winner! But the combination "higher sense" means again something different. If for instance a German asks: "Was ist der Sinn des Lebens?", you can't translate this "What is the sense of life? The meaning of the English sentence could even be derogatory. What the German means is: "What is the meaning, the real purpose, the higher transcendental sense of Life? What is the Philosophy of Life?" Asking such questions, the mind is very near to the next question: God, Creation, Creator.

If a German comforts himself that the killing of more than 7,000,000 of innocent people was necessary in a "higher, transcendental sense" he feels nearer to "the spirit of the Universe" be it manifested in the appearance of his saint Hitler, or in some other "misty" meaning; blood and soil; superior beings; "higher humanity; instruments of destiny"; etc. Needless to say, that many Germans don't think that way. But what means "many"? And even

if we decide to measure the "many" in exact figures,calculated according to percents of the whole German population,how should we find out their actual thoughts.And what means "whole"?Where should we start? Boys and girls who are already 10 years of age? Once we discover that such words used over and over again are in itself vague,we shall be at least on our guard.

A very interesting piece of translation (hundreds of other examples could be brought forward) will be shown in the coming paragraphs.It is an old story that foreigners,even when they speak the language of the other country quite well, have the greatest difficulties to get the actual meaning.

In October 1938 Mr.John Gloag went to Germany "to see for himself". It was just one month after Munich and the people of Britain still shaking under the crisis.Mr.Gloag had been to Germany before, and apparently speaks German well. After his return,he wrote a book Word Warfare (100).With this metaphor,he did not mean in particular the German propaganda.On the contrary.His first chapter carries the title:Smoke Screen in London,and according to his own words: "I wanted to escape from English propaganda, both favourable and adverse."

He could help noticing strange things in Germany,and he brings,among others a sample of German public notices,for instance

"Die Bevoelkerung wird aufgefordert spontan zu flaggen"

This sentence Mr.Gloag translates as follows:

"The population will spontaneously display flags!"

He writes the word spontaneously in italics,and mocks about the necessity to tell the people about their "spontaneity".But how far is Mr.Gloag's translation from the actual meaning!

The word spontan is an adjective,consequently it will be interpreted and evaluated differently.Moreover it refers not to a THING but to a mind reaction:to do something of your own accord,by your own free will,without being told to do it.

The word spontan is a foreign word,not belonging to Teutonic origin. Germans don't know,that the word stems from the Latin sponte which means free will,voluntarily. Consequently,most Germans (some intellectuals and linguists excepted) don't realize the contradiction in the above public notice:that they are told to/something of their own free will.Very likely,the man who worded the notice,didn't know the meaning of spontan himself.He may have had a vague notion that it refers to a mind reaction, a human EVALUATION.If he would have known,he wouldn't have written such nonsense.

But Mr.Gloag has (should I say derogatorily) "forgotten" to translate the German word "aufgefordert". As you can see for yourself,the word "aufgef-order-t", contains the meaning "order".And in fact,it is an order to the population,in the literal sense of the word.Mr.Gloag has instead put-in the harmless word "will" which might indicate the auxiliary verb to indicate the future,"will...display",or he might have tried to reconcile the meaning of "spontan" with "own will" as "will spontaneously display". But it is a misinterpretation,as ever there was one.The actual translation should run:

"The population is ordered to flag spontaneously"

The English word "order" is of Teutonic origin.The word "spontaneous" is of Latin origin. If we bring both to a common denominator in Teutonic terms,we get

"The population is ordered to flag without being ordered at."

Removing the foreign term spontan from the German notice,we get the same meaning:

"Die Bevoelkerung wird aufgefordert ohne Aufforderung zu flaggen."

The German have compulsory school education.They can read and write.But they never learned about semantics,about the meanings of words,and that some words,especially adjectives are very vague in meaning.Otherwise,how could they have stood such nonsense.

But this is not the whole story.The semanticists tell us,that the meaning according to the dictionary is not enough.We must view each word in its proper setting,not only within the whole sentence,but where and when it is spoken, to get its actual meaning.

You may benevolently translate the German words "wird aufgef-order-t" with the softer meaning "is requested".But then,just think that the Weimar Government had issued

many such "orders" or "requests" to flag. The Germans disobeyed. Whole streets were without a flag on such occasions, before the Nazis took over. With the Nazis, the meaning of "order" or "request" meant something completely different.

Mr. Gloag and his wife asked what happens, when some people don't act "spontaneously". He wrote: "We were told that they would be "called on" by a member of the party. We were left with the impression that a nice, cosy chat about the subject would follow."

With this impression Mr. Gloag and his wife, left for England. No doubt, that nice, cosy chat would have contained such words as: "I sincerely hope my dear, that you might probably and most kindly flag to morrow. This is no order, no request, just common rejoicing, you know! Heil Hitler!"

Ask anybody ^{in Germany} what it "meant" to the owner of a flat, ^{with} conspicuously undecorated windows. It could mean a knock in the dead of night and a dead in the morning.

Such was the ^{Nazi} meaning of such harmless words "spontan", etc. Semantics, indeed!

I hope that the reader does not lose sight of the proof, which I want to give throughout this long chapter, namely:

That the German people have been misled and intoxicated by misdirected language, that the German leaders have deliberately used words with vague meanings, and that the ruin of the German people is partially due to the fact, that they have not been taught how to examine the meaning of such words critically, and how to avoid their destructive influence.

Of course, the process of the poisoning of the German mind went on throughout the last centuries, and there were many Germans, free from such influence. To ^{George} them, the revolver, the concentration camp was necessary to "underline" the meanings. But the great majority of the German people was completely intoxicated. They believed in Hitler and in what he and his henchmen had to say. It meant Truth for them. We know the result.

One last example to show how some German intellectuals, wittingly, or willingly helped in this process. I refer to a German semanticist K. O. Erdmann who published: "Die Bedeutung des Wortes, Aufsätze aus dem Grenzgebiet der Sprachpsychologie und Logik." (Translation: "The Meaning of the Word, Essays from the boundary sphere of language psychology and logic.") Publisher H. Haessel, Leipzig.

In 1924 Mr. Erdmann published another book. Similar books have appeared for more than 2000 years, under the various titles Rhetoric, The Art of speech, Oratory and Controversy, and various similar titles. However, as far as I know, no book has been published in our times, with such a "devilish" title as this

Karl Otto Erdmann

DIE KUNST RECHT ZU BEHALTEN

(same publisher)

Methoden und Kunstgriffe des Streitens

(101)

Translation:

THE ART TO RETAIN RIGHT

Methods and Craft-tricks of Controversy.

Again the difficult word to translate is RIGHT. The sentence ^{in English} means: how to retain RIGHT if you "are right" and want to retain it. But the German sentence means something different: to retain right under any circumstances, even if you know you are wrong. In other words: to get the better of your opponent by any means. The "neutral" word for "Art" is "Ability". We have for this adjectival noun a symbol (p. 246) If we add the symbol for good we get the laudatory term "Art". If we add the symbol for bad, we get the derogatory term "Trick". The word Kunstgriff may be applied to the abilities say of a chemist, but also to the abilities of a cheat. The Germans have even the word Trick, but Erdmann was clever enough not to use it.

I opened the book at random, and hit on page 115. There I found the following paragraph. I print the original German text in a footnote. The reader, versed in German, may ^{translation} check the/

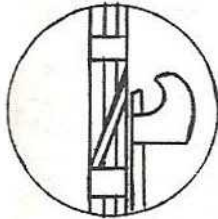
"In order to exploit ^{for retaining right} such misunderstandings, I would like to give the following advice: as an advocate of the Devil, Express yourself as much as possible in absolute terms. Leave the relations obscure, and confuse them deliberately, if necessary..."

Footnote. Original German text: "Um solche Missverstaendnisse bewusst auszubeuten, moechte ich als Teufelsadvokat die folgenden Ratschlaege fueres Rechtbehalten geben: Druecke dich immer moeglichst absolut aus. Lass die Beziehungen im Unklaren und verwirre sie, wenn noetig, absichtlich..."




One should not believe that such language is written by a German scholar. I believed that the meaning of semanticist refers to a man, intent of clearing up meanings. It remained for a German semanticist to prove, that semantics can be put to the opposite purpose. And this is in itself an indication of the situation, regarding the minds of Germans.

But, as said time and again in this chapter, the other nations are not free from this poison, and many of their leaders use such "language-poison" deliberately.

Here is an example from Fascist Italy,



Inscription on a silver coin in Mussolini Italy

		<u>animal</u>		<u>animal</u>
<u>E</u>	<u>meglio</u>	vivere un giorno da	<u>leone</u>	<u>che</u> cento da <u>pecora</u> .
It is	<u>better</u>	to live one day as a	<u>lion</u>	than hundred as a <u>sheep</u> .

I wonder whether such an inscription would have been possible in a country, where people could express themselves freely in public, in letters to the editor, etc. Did Mussolini think for a moment, that his fascisti would feel lions when putting on the black shirt, or was this animal slogan a preparation for the conquests in Africa, where lions live.?

Today - the 13th November 1948 - when writing these lines, the newspapers carry the report about the sentences of the International War Crime Tribunal in Tokyo upon General Tojo and the other Japanese leaders.

General Tojo said:



The spirit of the Japanese people is certain to rise again

I have depicted the word spirit not as a vague thought, but as representing the mind of a Japanese. I have furthermore not added the metaphor symbol to the symbol for to rise. Even so, the statement remains full of vagueness, to be interpreted differently by different minds.

The lawyer of General Tojo, Mr. George Francis Blewett, of Philadelphia, apparently fearing for his client's chances in the appeal, hastily added: "Tojo, in speaking about the people rising again, did not necessarily mean it in a military sense."

But we may be sure, that Tojo will be revered after his death, and his statement of the "rising people" will be conveniently interpreted by the Japanese people according to the different interests of each Japanese, the farmer, the worker, the poet, the democrat, the pacifist, the merchant, the nationalist, the manufacturer, and the professional soldier.

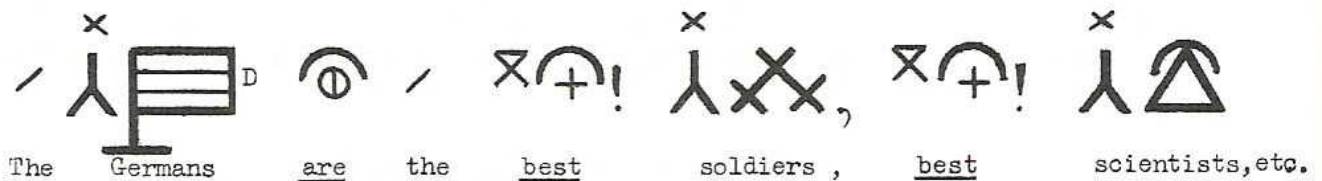
I have chosen many symbols from the German language, and one from Italy and Japan, not because in these languages do we find such misleading statements, but because these 3 nations afford an example how unscrupulous leaders, in using such language, have brought disaster and ruin about three nations.

Similar statements are made in any language. The question is only how far-reaching the disastrous influences go. We know too well, the slogans coined in different countries about the British, the Roman-Catholics, the Jews, the Negroes, the Communists or members of neighbouring states. We know too, that such slogans cause demonstrations, riots, shooting, etc., etc. and invariably, innocent people suffer. The word-coiners remain in safety.

I believe, that Semantics, when taught in school would help to promote peace among the peoples of this earth. On page 315 we learned that the article the represents a vague this. Slav languages have not the, only this. "This man" is clear enough, and means only one particular specimen. "The man" may be used in a sweeping and vague meaning for any man. This distinction is not generally recognized. Some Nazi leaders have taken the consequences. If the Jews are bad, it means all of them, and similarly, the Poles and others.

On the other hand, some Germans have constantly maintained that the Germans are best. They told the German people that the Germans are the best soldiers, the best scientists, the best chemists, the best organisers, and of course, make the best products.

Let us write down this statement



For most people, the words are and best indicate something real, definite, absolute! This is best, and this is all there is to it. They don't realize that best refers only to a meaning in our heads (as indicated in the symbols and there clearly visible). Consequently what one mind considers best another mind often hotly denies.

But such statements are the kind of vague assertions, which - when repeated often enough - are believed at last. Not only the great majority of the German people believed the above statement, the great majority of the peoples of other nations believed it too.

Carl Crow wrote once about his visit to South American countries. He asked an Argentinian: "Tell me, why do Argentinians consider themselves best among the other South Americans?" "Why," said the Argentinian, "because we are best!"

The two world wars have proved, that other nations have beaten Germany, not only in the military field, but also in the field of science, production, invention, etc. etc. In other words: "the Germans are not the best soldiers, not the best scientists, etc. etc. but neither are the other nations." "Best" is a meaning in our heads. If you look closely at the symbol for best you will recognize not less than 4 symbol elements, which indicate relative meanings. The symbol for much, the multiplication mark, indicating only a multitude, but not exactly how much. The multiplication mark is restricted by a line, drawn somewhere in relative space. Both symbols indicate most (p. 114). Furthermore we have the symbol for the mind, different with different individuals. The fourth symbol is the plus + and we know from page 453 that even this sign depends in what direction we are counting. At last the exclamation mark ! serves only one purpose, to accentuate the relative meaning of the 4 symbol elements.

Some psychiatrists maintain, that the continuous assertion of German people, that they are best, originates out of a feeling of inferiority, which they try to suppress. These psychiatrists propose education in psychology. No doubt, some knowledge of the working of a human mind would help in recognizing one's own thoughts.

The study of semantics, the meaning of words, would no doubt, also be beneficial. When the Germans realize that unscrupulous leaders have intoxicated them with vague slogans, they may think in terms, more adapted to the realities. If semantography is accepted, for instance in the United States, and universities start printing research reports in semantography, German students may learn semantography for this purpose. But then, the symbols would work in their minds. There is one great advantage which semantography has over any other education proposed for Germany. Semantography may prove to the Germans, that - if they are not best, neither are the other nations, and if they are not right, neither are the allies. At present, they strongly resent "to be put in the wrong", and they readily grasp any "logical conclusion" to prove to themselves that they are right.

The Germans should and would and eventually will make an excellent member in the family of nations. The sooner they realize that words with vague meanings have been used by their leaders to lead them into ruin, the better.

I offer this symbol analysis, in the sincere hope, that it may be of beneficial value in the process of German recovery. I hope that German readers will realize this aim, despite the bitter words which came into my pen. I am only a human being, and my mind is heavy with the memories of the last 10 years.

But the path for the Germans may be long and hard. The poison is ^{gone} too deep, and still works. From the incredible slogan of the first world war "Gott strafe England" (God punish England) to the slogans of the Nazi regime, there stretch the years of a whole generation, and it may take another generation to make the majority of Germans think in terms, which fit life facts, and help them to a happier life and a happier future, not at the expense of their neighbours, but with them.

Reports from Germany do not indicate this trend. On the contrary. They have now a new name for Displaced Persons. They call them Gaskammer Deserteur, which means plainly Gas-chamber deserter. Not gas-chamber fugitive, or gas-chamber escapist, but DESERTER. The

majority of Germans has been reared to be soldiers. The noblest occupation for many Germans is to be a soldier. The education in the schools is directed towards this aim. And for a "soldiery mind" nothing is more despicable than a deserter. This dastardly crime deserves only one punishment: death. Those persons, without homes, without belongings, without hopes, without knowing where to go, and still living in those dreadful camps Bergen-Belsen, Ravensbrueck, and others - they have deserted the gas chambers.

It will be a long road for the Germans, the road to recovery. Will they go it, or will they slip further down into the ruin, which language and language makers have brought upon them?

DEVICES FOR TEACHING SEMANTICS IN SCHOOL

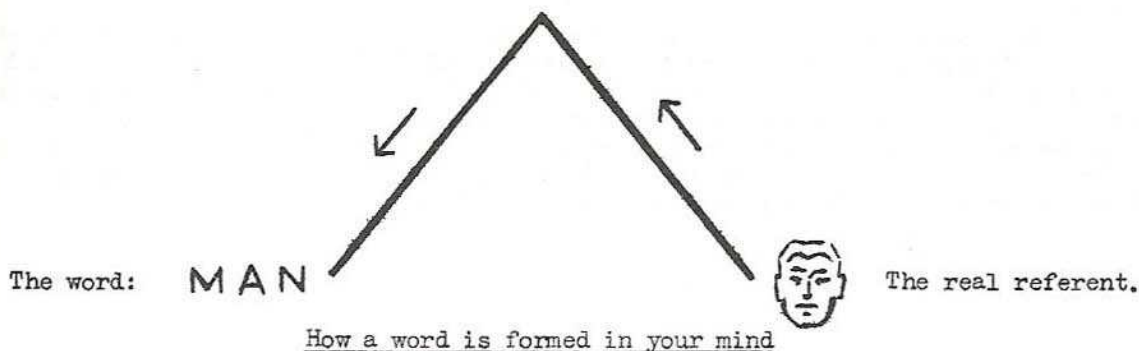
A preview of three chapters in the third book.

"In this connection one should particularly remember that the human language permits the construction of sentences which do not involve any consequences and which therefore have no content at all - in spite of the fact that these sentences produce some kind of picture in our imagination."

W. Heisenberg (69)

The three devices, described in the following paragraphs, can be made in a large size for the school room from cardboard, plywood, or printed on a paper chart and hung in the class room. Or they could be made from card board in a small scale, so that each school child may have one. Or they may be made in a miniature size from metal and hung on a man's watch chain, or a woman's bracelet, to be used in any argument.

The reference triangle of C.K. Ogden and I.A. Richards, authors of "Meaning of Meaning"
(17)



On top of the triangle imagine yourself. You look down the right side of the triangle and there you see the real referent, for instance, a man. Within your brain the mental machinery is set in motion. You remember where you have seen a similar thing, a living being, standing upright on two legs, having two eyes, two ears, etc. etc. Then your mind remembers the word for this special referent: man. You may speak this word with your mouth, or you may write down the word on the left side of the triangle: MAN.

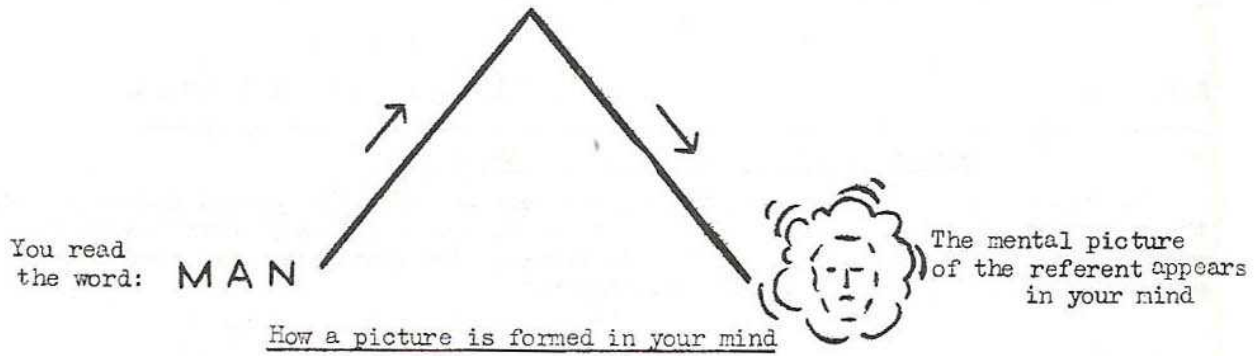
In view of the fact, that light rays, reflected from the referent man reach your eye, which set your brain in motion and direct the hand to write down the word MAN, the two arrows indicate the direction of mental activity, from right up to left down.

This indicates the direction of mental activities which goes on in all of us (people with mental disorders excepted). The foregoing description refers of course only to people who have already learned about the various referents in nature, man, woman, boy, girl, horse; stone, cloud, sun, etc. etc., and the appropriate words which go with each referent.

Children who learn to speak must be taught the word which goes with a certain referent. If this is not done, toddlers will invent their own words. In this third book, you will find a chapter "The Origin of Language" in which most interesting quotations from Otto Jespersen's books are made. Jespersen reports about children, who have been left to themselves, and have invented a kind of language. In one case, the family believed that nothing could be done about it, and learned the new language of their child (see p. 619).

Scientists, who classify things, animals, insects, flowers, minerals invent new names for newly discovered things, and they arrange their nomenclature according to a certain system.

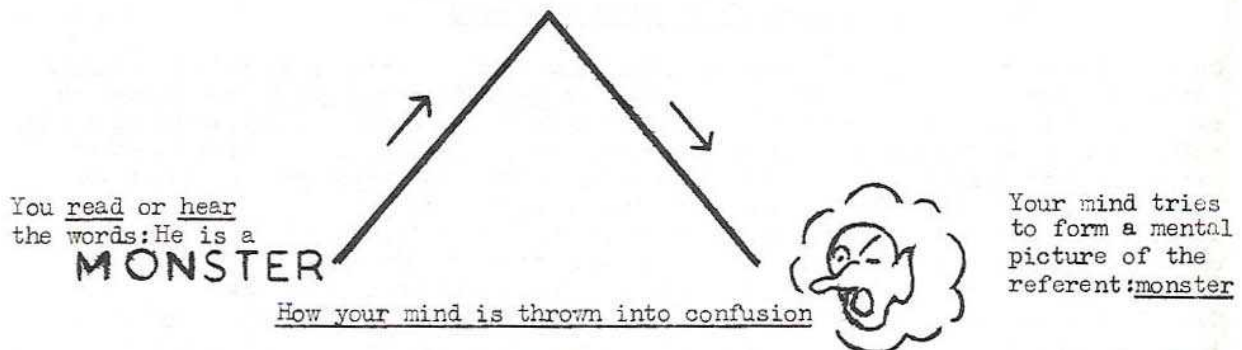
Let us now reverse the process. We read a page and the light reflected from and around a certain printed word, reaches our eye.



Imagine yourself again at the top of the triangle. You look now down on the left side of the triangle on a paper page full of printed words. Light is reflected from the page and reaches your eye. Your mental mechanism is set in motion. You can read the word MAN and in the files of your memory department, the referent is soon located, transmitted to the projecting room, where the picture of a man is immediately shown. You may close your eyes, but you will still see the picture of a MAN in your mind - a most wonderful and certainly miraculous mechanism of our brain cells, the working of which is still a mystery. We have not the slightest idea about it, and can only guess. You have to be a physicist or chemist or biologist to know that all this is beyond the chemistry, physics and biology we know so far. It seems that we know more of what is going on on the sunlit part of the moon, than in our mind.

However, the picture of a MAN which we conjure up in our mind, will be a bit indistinct. It would be different if we would read the words: Mr. JOHN SMITH of 15 Grosvenor Street, and if we would know him very well. In any case, the word MAN or SMITH or Mr. HAYES (whom we never met) will conjure up a picture of a real referent: a human being, male, etc., etc.

As long as we observe real referents, or read words standing for real referents, we know what we are talking about. The mental confusion starts, when we read words or hear words and can't find real referents for them in our imagination.



The arrow going up from the word MONSTER indicates either the light rays reflected from and around the printed word, when you read. Or they may indicate the sound waves which reach your ear, when you hear the word MONSTER. In both cases, the eye, or the ear telegraphs the word to the memory file department, where hasty searching in confusion occurs. If the word MONSTER stands alone, the files of animal and sea monsters may be searched and reference cards sent to the projecting room. If however the full sentence He is a monster is read, then pictures of monstrous human beings will be thrown on the screen within your mind. Reactions of fear, anxiety, abhorrence, etc., etc will result.

The game is - in the words of Stuart Chase:

" F I N D T H E R E F E R E N T "

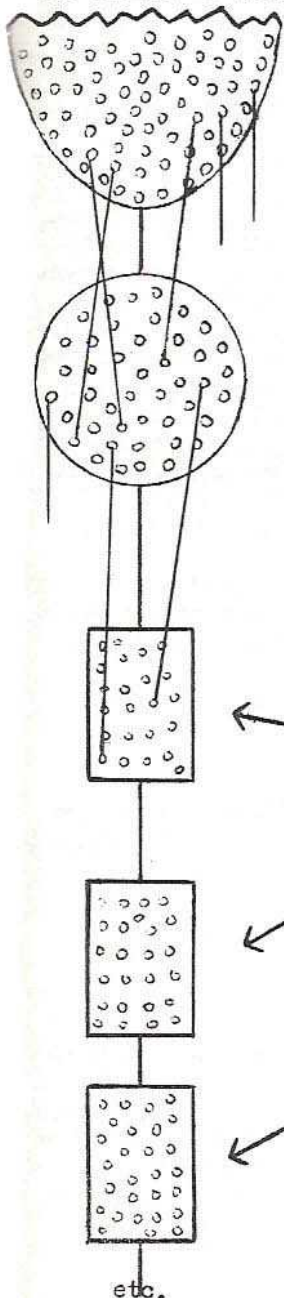
It may be clear from the foregoing explanation that this little gadget may be helpful to recognize vague meanings. The word "best" standing alone, will not conjure any referent. If we add: best flowers, we shall get a picture of flowers in our mind, but we would not be able to discover the meaning of best in this picture. Only if we get into details and ask: Best? When? Where? What? Under what circumstances and for Whom?, then we may be able to talk and understand more clearly.

You see, that the reference triangle of Ogden and Richards is mainly built up on what we have termed in this book, the chemical THING. They call it the referent.

Such a device could be of great value for teaching semantics in school. Here below is another device.

The Structural Differential of Alfred Korzybski, author of "Science and Sanity" (56)
(with kind permission of the copyright holder i.e. Alfred Korzybski)

Korzybski's device is build up on the notion of the object, which again represents our chemical THING. He goes even further and provides a special part, representing the unseen chemo-physical processes which go on within the molecules and atoms of the chemical THING. The whole device is made up from plywood, or metal, or printed on paper.



This part represents the unseen chemo-physical processes, which go on within the atoms, protons, electrons, etc. of the object. The shape of the parabola and the broken line on top indicate that these unseen processes go far beyond of what we know about them. The little holes indicate the many characteristics of which we are, or are not aware and which extend far beyond the broken line.

This stage represents the first level, also called the first silent level.

This stage, represented by a definite circle, containing a number of holes (characteristics) represents already an abstraction. It is what we human beings observe with our senses (vision, hearing, touch, smell, taste, etc. all this controlled by our brain) of the object.

This stage is called the second level, or second silent level, because we have seen, smelled, touched, etc. the object, but we have not yet spoken about it. It is also called the objective level. Let us suppose that the object is what we term a MAN.

The connecting lines (represented by cotton threads in the device) indicate characteristics left out or carried over to the next level. (see next page)

Now we open our mouth and speak about what we see, touch, smell, etc. This stage is therefore the first verbal level. It represents already an abstraction of what we have observed, because we can never tell about all characteristics, contained in the object. We start now to describe it. For this reason - because we use only words of a descriptive character - this stage is also called the descriptive level. The oblong shape indicates a verbal statement, in contrast with the other shapes above, circle and parabola, which represent non-verbal, or silent levels. Of course, our descriptive terms for instance red are gained by former experiences and inferences. But nevertheless, we can speak of the descriptive level, because we act here as a scientist acts. We give then a "label" to the object, a term, a word, say MAN.

This second level is also called the inferential level, because here we are going to make inferences. We may say for instance:

"A specimen of the species 'homo sapiens'"

But we make another inference and say:

"A thinking being, with a power to deduce and make logical conclusions."

But we may make any other statement, which indicates an inference on this level, or we may go on, and deduce another inference from the first inferential level. This then would represent the second inferential level, or (counted all oblong shapes together) the third verbal level. We may say for instance:

"A plumber" or "A father" or "An Albanian" or "Son of a criminal" or "A dishonest fellow", But we may make these different statements one after another, each represented by another rectangle,

etc.



all of them connected by a string, which should indicate then one abstraction follows another, that one inference is made from another inference.

The actual device contains also some little strings which are connected ^{overleaf} (see of the) with some little holes. Sometimes the strings are not connected with holes in the next shape, which means that these characteristics are left out in the following verbal levels. If however, for instance, the physical process which produces red is observed, than one string from the parabola, goes to the circle, and from there a second string to the first rectangle, where we say the word red, and if we comment in the inference rectangle on this red again, a little string will lead to this rectangle, and so on.

The structural differential is a very helpful device to show how statements are made. In any case, if we make or hear some statement, we must go back to the facts, that means to the object, the chemical THING (in our terms). Korzybski maintains, that our statements are built up by higher and higher levels of abstractions, and confusion arises, when we mix-up levels of abstractions. A dog on the silent level is something which we can see, touch, smell, etc. On the descriptive level we call it a dog. On a high inferential level we call it a Danger. If we call the son of a man (who ended in jail) a dishonest fellow we confuse levels of abstractions.

I have had opportunity to observe the handling of the structural differential and the reference triangle by various people in a course on semantics, and according to these observations, I venture the following opinion, being fully aware, that they come from my mind and are therefore relative and open to argument.

The reference triangle is very good for the examination of single words, single sentences, as for instance "He is a monster".

The structural differential is also good for the examination of single words or single sentences. It gives us a good overall picture as how we go from one inference to the other, and it can be used, in addition, to the reference triangle. For instance, the statement "He is a monster" is, no doubt, an inference. On the silent, objective level, we may find a human being, a man. Then we may describe his twisted nose, his split lips, his great teeth, and his green eyes on the first verbal and descriptive level, and then we may make on the first inferential level the statement: "He is a monster". But this inference may happen to be on the 7th inference level, a very high order of abstraction. Actually on the descriptive level he may be a normally built man. On the first inference level we may state: "A handsome, goodlooking fellow, imparting confidence." Then after one inference after the other, we may arrive at the 7th inference level and say: "He is a monster". Why?

Apparently he did something, or said something, which we evaluate as "monatrous". In other words: he did some physical ACTION.

And this seems - in my opinion - the "fault" in the triangle and the differential: they have nothing to indicate directly to school children and other pupils, the physical ACTION. They do indicate the chemical THING, and they do indicate words and statements, but they do not indicate the physical ACTIONS which are varied and important.

For this reason, I evolved my gadget, which consist only of my three indicators, and the symbols of our senses.



My gadget to examine thoughts, words and sentences.

painted red, which means (like traffic lights): DANGER, STOP, you make some EVALUATIONS !

painted yellow " " " " " : WATCH OUT and observe the ACTION.

painted green " " " " " : SAFE GOING, you handle real THINGS.

The three indicators are made from plywood, about 8 inch square. They hang on a vertical board, which is mounted in a stand below. The three indicators are detachable from the vertical board, and can be handled by the children. The stand carries the symbols of the human senses. The three symbols for space, time and numbers may be added, separated from the sense symbols.

A wooden device for schools, abt. 2' 8" high.

HOW TO EXAMINE A "MONSTER" WITH THE DEBATING DEVICE

Herebelow is an example how the gadget can be operated. We take again the statement "He is a monster" and observe a human being, himself and his various actions.

	<u>First example</u>	<u>Second example</u>	<u>Third example</u>
 	EVALUATION: <u>flat</u> (nose), <u>ugly</u> (mouth) <u>too long</u> , <u>rough</u> (hair) <u>dirty</u> (clothes) ACTION: going THING: biped,1 head,1 nose, 1 mouth,2 eyes,2 ears, 2 arms,2hands,2 legs, etc.etc.	EVALUATION: <u>untidy</u> , <u>disorderly</u> , <u>lazy</u> ACTION: throws papers around, doesn't work for hours. THING: biped,etc.as descri- bed before	EVALUATION: <u>impolite</u> , <u>rude</u> , <u>unconcerned</u> for others. ACTION: shouts with the land- lady,throws out visi- tors. THING: biped,etc.as descri- bed before
LABEL:	A MONSTER	A MONSTER	A MONSTER

We should notice that the words used for the description of the THING and his ACTIONS contain no human EVALUATION, as we understand it in this book. These words constitute what we call descriptive language. The word shouts means actually speaks too loud. These words contain EVALUATION. However, in this case, we could introduce measurements by stating the sound amplitude in decibels. People are familiar with meters, and yards, but not yet with decibels.

But the underlined words in the section EVALUATION contain adjectives, and words referring to mind re-actions (e.g. unconcerned) and mind evaluations (work, evaluated as too little, henceforth lazy).

We could write down all the above statements in our symbols, and the EVALUATION words would contain in their symbols the EVALUATION indicator and also ^{the} symbols of our senses.

Apart from this, people like to label with one word only, anything they describe and evaluate. MONSTER is apparently the label which some persons might give to the above described biped. But you see, that the first MONSTER label refers only to his appearance, whereas the second MONSTER and the third MONSTER is derived from his actions.

We may even write down a symbol for the "wholesale" EVALUATION "M O N S T E R". It just depends, whether we apply one of the three mind symbols.

 A MONSTER a <u>man</u> very, very much <u>disliked</u> !!! (emotionally)	 A MONSTER a <u>man</u> , whose act- ions are very, very much <u>bad</u> !!! (rationally)	 A MONSTER a man, whose act- ions are very, very much <u>wrong</u> !!! (morally)
---	--	---

From previous chapters we know that each person may choose the ^{special} mind symbol, believing that now his heart, now his reason, and now his conscience speaks up. Some people would not use the conscience symbol and the many multiplication and exclamation marks, for the actions; shouting with the landlady and throwing out visitors; but some "moralists" may use these symbols. It just depends on the mind, who makes the EVALUATION.

In regard to his features, flat nose, ugly mouth, we may point out that other people would not have this impressions, and may evaluate quite differently. A girl in love with this man, would not notice them as ugly.

In regard to his ACTIONS, we should again be careful in our EVALUATIONS and should inquire about the circumstances. Why does he keep his room untidy? Perhaps he has no time, being engaged in other more important work. Perhaps his landlady who is supposed to do the cleaning, doesn't do it at all. May be, for this reason does he shout with her, ^{or perhaps he is deaf} that he throws visitors out, because they disturb him in his other important ACTIONS, which we have had no opportunity of observing.

If we make ^{such} EVALUATIONS and use ^{such} EVALUATION words, we should be very careful. Or even better, we should not use such words at all. I mean, such derogatory words. We may laud people if we want to judge. But we should not use words which are only doing harm.

Incidentally, the description above, fits a certain man, and ^{some} people around him, have judged him as shown above. His name was Beethoven.

"An historian, someday, may call this the Era of the Organized Lie."

Irving J. Lee (84)

A student, who has studied the foregoing chapters carefully would have become aware of the vagueness of the words pertaining to human EVALUATION. He may try to form a report on some matter, avoiding as much as possible such words. This report would then be written in what we call "descriptive" language. It would not contain, what we call "judgements", or it may contain such "judgements", but clearly separated from the description. Such "judgements" may start with such phrases as: "According to the working of my mind, I venture the opinion that I think, or believe,....."

However, the part of the report, which we call "description" would contain such EVALUATION words as blue, long, rough, etc. The meanings of these words ^{have} been gained from previous experiences, inferences and judgements. We must therefore realize, that it is impossible to separate "description" and "judgement" completely.

Reports as indicated above are usually written by scientists. They try to avoid such words as blue, long, rough, etc. by introducing internationally accepted measurements.

If we write such reports in the symbols of semantography, we may find that human EVALUATION words in the "description" part would contain the symbols for the eye (for blue) and the symbol for the hand (for rough).

On the other hand, human EVALUATION words in the "judgement" would mostly display the symbol for the mind, which would warn us sufficiently. The EVALUATION indicator would abound ^{too}.

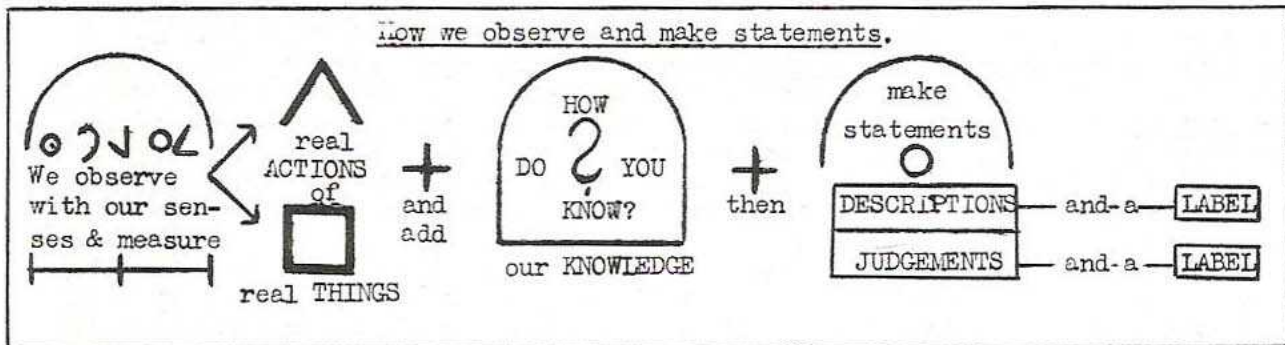
Reports of scientists, written in such manner, are usually verifiable. Other scientists may repeat the experiment, according to the "description", and may find the "description" true. However, they may think in quite different directions about the experiment, and consequently they may come to different "judgements".

This book is full of paragraphs in which the author urges the "man in the street" to adopt the viewpoint of the chemist and physicist, that means to separate "description" from "judgement". Many people don't bother to look at something carefully in order to form a "description" in their mind. They "judge" right away... that "rogue", that "foreigner", etc. and this label - one word only - stands for some "judgement" which, if carefully made by a mind, would have to contain perhaps hundreds of words. But this "judgement" would have to be preceded by a "description" which in itself might again contain hundreds of words, and might be concluded by a label again, which would be one word only.

We must therefore learn the difference between a label and a description or judgement,

- A DESCRIPTION may contain hundreds of words, then followed by the label: MAN (one word ^{only})
- A JUDGEMENT " " " " " " " " " label: ROGUE "

Now here is a proposal for a chart to be hung in classrooms.



Following the explanation given before, the chart should be self-explanatory. Children could be taught how to observe and measure real ACTIONS of real THINGS, and how to make descriptions as distinguished from judgements. Then they would ^{come} be aware that, in doing so, they are adding their previously gained knowledge to their present observations.

So far, we ourselves have observed THINGS and their ACTIONS. We see for instance a stone on the table. It's real, no doubt. However, our eyes are not perfect instruments; besides it "could be done with mirrors". So we don't trust only our eyes, but we employ another organ, our hands. We touch the stone, feel its weight, etc. We say then with conviction:

"A stone is on the table"

and we sincerely and honestly believe that this statement is the Truth, the whole Truth, and nothing but the Truth.

We may be much surprised, when we are told, that the "stone" is a piece of plastics, with a surface texture and colours like a real stone, and that it is inside weighted with lead to give it the proper weight.

Such an experience might shake our confidence in our senses, and would also teach us that the words true and Truth are relative in meaning. Needless to say, that they represent grammatically an adjective and an adjectival noun, and fall in the class of human EVALUATION.

This of course, is a terrific shock, because up till now, we believed Truth to be something absolute. Yet, the "absolute Truth" ^{in the universe} may be something which human beings might never grasp with their very imperfect senses. Consequently our symbol for Truth contains the symbol for Creation, Nature (Creator), but there is a question mark within the symbol.



Creation, Nature, Universe
(Creator, see later chapt)



Truth
"absolute"
in our Universe



Science, Philosophy
(contemplating Nature)



Truth
in a human mind

We see that our symbols give the meaning of Truth, the high place it deserves. It shows the symbol for Nature, Creation and Creator (see later chapter). The question mark however, should make us wary even in those cases, where we believe to know the Truth.



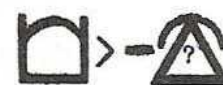
minus Truth
(without), a lie



statement, not true
a voiced lie



conscious
reason, open



conscious of Untruth
a deliberate lie,

We know that somebody may make a statement, and he wouldn't know that it is a lie. Somebody else may make a statement in full consciousness that he states a deliberate lie. However, to find this out is very difficult. The above symbols show the symbol for the mind twice, and until "X-rays" are invented to read a man's mind, we can only guess. A lie detector is now in operation, which measures the blood pressure, the heart palpitations, and the amount of sweat coming out at the palm of a hand, when people make statements. However, the operation of such an apparatus is still a very difficult job.

The two mind symbols above do not indicate always one and the same mind. Sometimes, or better, in most cases, we do make statements, which are not born out from our own experience and our own observation. In most cases our statements ^{are} based on what we hear or read from other minds. We believe their statements to be true - but they may be lies. The one thing we can do is check the statement. However, this is very often difficult.

If somebody tells you, that water boils at 100 C°, you would take it as Truth, especially because it comes from a scientific source. However, you may make a thousand experiments, and find to your dismay, that water does not boil at 100 C°. Then you may go to that man, grip him by his tie, give him a good shaking, and demand an explanation. Then he would tell you, that water boils at 100 C° only in a special case, at an atmospheric pressure of 760 mm Hg, the water being free from impurities, etc. And he would give you tables, which would convince you by further experiments, that he did not tell a lie but what we call a "half-truth."

Now we know about the meaning of statistics. Cynics may tell you about the three degrees of lying. (1) a white lie (2) an ordinary lie and (3) statistics. There are people, who can be silenced in an argument by "Statistics shows...." Others will, of course, retort with the statement that "Statistics is the third degree of lying." However, this cynic may know perhaps, that he is deliberately lying. Statistics, in most cases, are "half truths" or we may say, using our chart: "the descriptions may be correct, but the judgements...?"

HOW WE READ, AND HEAR, AND JUDGE, AND BELIEVE TO KNOW

If a statistician would have counted all the flags in Hitler Germany correctly, and compared the figure with flagging in other countries, his graphs may be truthful. However, if he would make the judgement: "In Hitler Germany - according to my statistics - people are more patriotic than in other countries." then we don't need to rely on our symbols to tell him that his statement is a judgement, and therefore unreliable. He counted the flags, but not the "patriotism", a human EVALUATION word, not a THING.

But let us suppose two different statisticians, only concerned with the counting of real chemical THINGS. The one would state: "In the United States, every fourth man owns a motor car." The other would state: "In Soviet Russia, every second man owns a motor car."

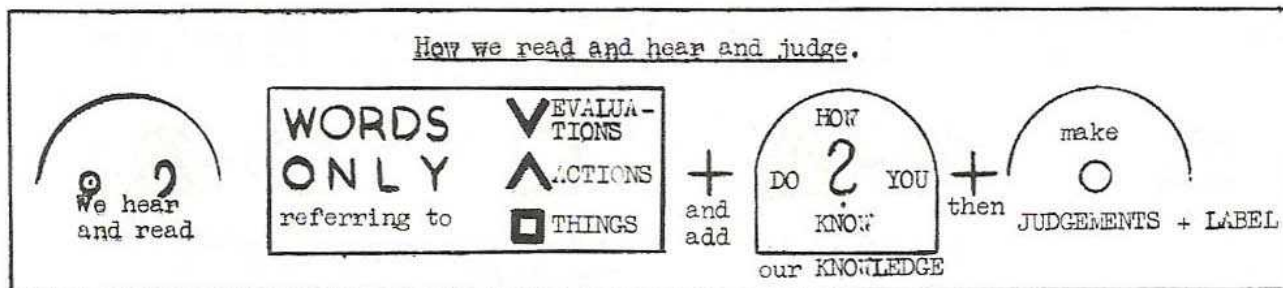
Both statements may be true; both statements may be untrue or even a deliberate lie. In the case of the boiling point of water, we could make our own counting. But we can't count all motor cars in the United States or in Russia. So, what can we do?

Just in the case of the boiling water, we may study reports of different observers. In science, a certain figure is ascertained if different observers arrive at it from entirely different experiments. In regard to the motor cars in the United States, we could study the taxation statistics in regard to motor car taxes, or the petrol consumption, or the manufacturers figures, or the license plates figures, and see if we arrive at the same or nearly the same figure.

But again we can't do all this. So we may rely on people, who challenge a figure, and set out to prove, that it is not true. In other words, a researcher, in opposition to another researcher. Of course, we assume that the government will allow him to study the files, and we further assume that - if a government official refuse permission - he is free to raise hell, without ending in jail.

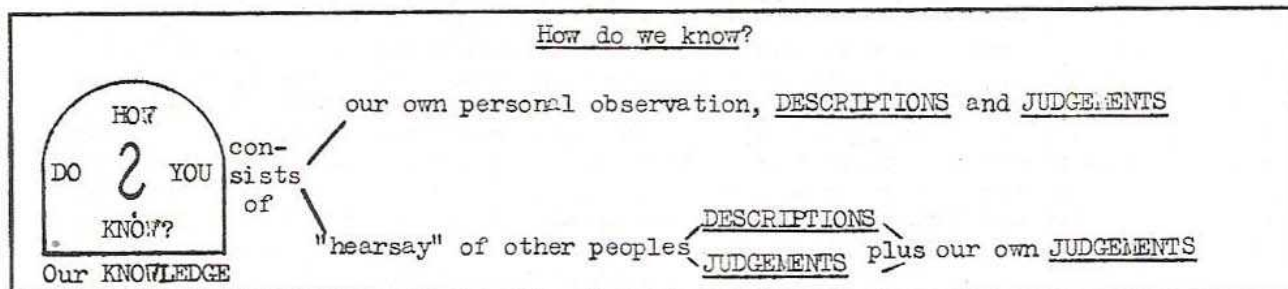
We see, that the great advances which have been made in science, have only been possible by a freedom of research and a freedom to challenge other statements. And we should assume the standpoint of the scientist, who demands this freedom of research and freedom of opinion.

Here then is the second part of our chart to be hung in the class room,



Making exercises with this chart would make the student realize, that what he hears and reads, are not the real THINGS and their ACTIONS, but what other minds reported about those far away THINGS and ACTIONS. But more - what he hears and reads consist not only of descriptions, but thoughts "tainted" with EVALUATIONS of the mind, who wrote the lines, or tells us his opinion. The symbols of semantography may then help us to separate, as far as possible, the descriptive terms from the judgements and evaluations.

Then we add our own knowledge and this symbol shows us again our own mind,



In these three charts, which could be placed on one single paper, the words JUDGEMENTS should be printed in red, as well as the EVALUATION word and symbol and the various mind outlines. This - in connection with the exercises on semantics should make the students aware, how little they know from personal observations, and how much they depend on other peoples judgement. Naturally, this chart is only a proposal, to be altered if necessary.

People, who make statements with utter conviction, being very sure of themselves, could

be effectively stopped by asking them "How do you know?" and keep on asking them this question. They will soon get mad, but in the end they would have to produce the evidence. If they bring forward books of other writers on the subject, semantography gives you a tool to examine their statements, and point out the vagueness in them.

"How do you know?" could become a casual remark at ^{the} university campus and college, just like "How do you do?" Students, aware that their listeners may at any moment burst upon them with "How do you know?", would become careful when making statements.

HOW TO RECOGNIZE FALLACIES IN DEBATES

I intend to include a series of chapters in ~~this~~ third book, about the fallacies of discourse, which people usually make in a heated debate, wittingly or unwittingly. Most of us, are almost every day, entangled in a political debate, be it at the breakfast table, in the office, workshop, pub or elsewhere. There are certain people, who use all the tricks in order to be "right" or retain "right" under all circumstances. If you corner them, they will quickly jump out, and change the issue, sidetrack it, retort with an assertion which has almost nothing to do with the issue, or will you ask you something very obvious, which cannot be denied, and will then nail you down. I have observed many instances ^{in which} intelligent people, beaten by a charlatan of rhetoric, felt frustrated and cheated. They were hit, but they didn't know what ^{had} hit them.

The tricks are small in number, and knowing them, means the ability of warding them off. I believe that such a chapter would be welcomed by anyone interested in threshing out a problem by debating on fair grounds. Semantography would be an additional help.

DEMOCRACY

"One thing is at least obvious. The word - Democracy - has come to mean anything; or rather it means so much that it means nothing at all... If ten absolutely different people with ten absolutely different ideals can all say that they want Democracy, and that their policies are democratic, it is plain that Democracy must be a term so elastic as to be almost useless... What A calls Democracy, B calls Plutocracy, and what C calls Democracy, D calls Anarchy, Bolshevism and the end of all things.

In fact the puzzled seeker after truth will probably come to the conclusion that "democratic" and "undemocratic" mean to most people who use words, nothing more than "desirable" and "undesirable".

Yet what a sorry state of affairs. Here is a supreme idea for which men are willing to be imprisoned and tortured, to kill and be killed; and no two people have the same view as to its meaning...

So it comes about that the loose and careless handling of an idea may be as hazardous as the loose and carelessly handlings of explosives. If it is madness to play with a substance of whose properties one is ignorant, it is equal madness to play with language and concepts whose exact meanings are undecided."

Ivor Brown (79)

The above quotation gives us the problem in a nutshell: different minds have just a different idea about the meaning of this word: Democracy. Moreover, Ivor Brown resorts to an analogy, or call it a metaphor, that the careless handling of this word, resembles the careless handling of explosives. I believe, that this is more than a metaphor. Just think, that the careless handling of this word leads sooner or later to the use of real explosives. So, the linguist-chemist should be allowed to step in, and to explain how word-explosives can be safely handled.

In this book, I have maintained that semantography gives us word formulae, similar to chemical formulae. They reveal the inherent structure and the inherent danger. I said, that

semantography is a geometrical "language". I said too, that a geometrical language is "truer" to nature than a phonetic language. So let us see, if the rules of semantography can us help to a better understanding of this word, on which the peace of the world depends.

What "is" Democracy?

First of all, let us realize, that - at this level - we are dealing with a word only. It happens to have the sound D-e-m-o-c-r-a-c-y. It might just as well be Bobocracy. It wouldn't make any difference.

Furthermore, the word stems from an adjective: democratic. A democrat is a democratic man, a democracy is a community, a group of democratic men and women. We have thus located the chemical THINGS, which are qualified by the adjective democratic.

Now, adjectives belong to the class of human EVALUATION. We know, that each mind evaluates differently. What is democratic is evaluated differently by each person. We know, that no one can be absolutely right.

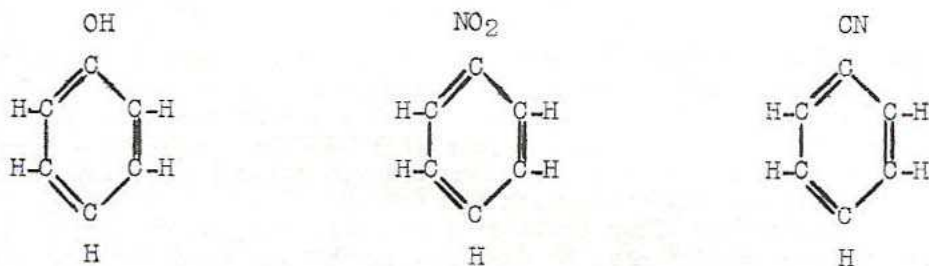
We have seen how a physicist can clear up disagreements in regard to EVALUATIONS like long short, wide, narrow. He applies a ruler and measures in units, practically valid for any observer. We have seen how a chemist writes down a chemical formula, which tells him a lot about the inner structure of a chemical.

Similarly like chemical formulae, the symbol formula tells us of the inner structure of the meaning of a word. In chemistry we deal with chemicals which sometimes have a very complicated formula. But the formula is built up of the simple symbols of the chemical elements.

We may now realize that the word Democracy has a very complicated meaning. It refers to many activities and relations of millions of different people. It refers to a complicated structure. In semantography, we would have to draw up a complicated formula.

However, the complicated formula for Democracy, would consist of the simple symbol elements. It could thus be resolved into simpler meaning elements. We may teach the meaning of Democracy, just as we teach the meaning of a chemical formula.

Today boys and girls of about 13 years of age learn chemistry in school. They learn to recognize the symbols for the elements, like C for Carbon, H for Hydrogen, and O for Oxygen. Consequently, boys in England or Siam or Ecuador have not much difficulty in discerning the elements in complicated formulae like these



Now, thanks to general school education boys and girl in many parts of the world know what all this means. They will tell you that this writing refers to chemical substances. They will tell you that these substances can be built up in the laboratory from Carbon, Hydrogen, Oxygen and Nitrogen. They will tell you too, that the structure of these substances are similar, and that they stem from one substance benzene. According to this similarity they will guess, that probably all three substances are liquid, and are inflammable. And they might tell you that the one with the group NO₂ may be used as an explosive, and that the one with the group CN might be a strong poison.

All this seems very simple to the boys and girls. Incidentally, the formulae have the same meaning in any language of the world.

Now, if we try to draw up formulae for the different democracies, we know that they will look somehow similar in structure. On the other hand, there will be differences. And these differences will determine particular properties of these democracies.

If boys and girls have been taught to distinguish between differences in chemical groups, why should they not be able to understand and distinguish between different properties of different democracies, if such formulae are drawn on the black board. They would recognize the symbol elements, the group symbols, the structure and they would be able to tell, what meaning might be vague, or "explosive" or "poisonous", under certain circumstances.

Innumerable books have been written by politicians, economists, philosophers, sociologists, etc. etc. about Democracy. Uptill now a chemist has not attacked the problem with the methods applied to chemical formulae. However ridiculous the following reasoning may seem to many readers, the very fact that a new reasoning is applied may make it worth reading. A formula for Democracy and its derivations may have great advantages. It may be printed on a chart to be hung in the class rooms and the community centers. It may be readable in any language of the world, and, of course, in the language of the country. The phonetic words of the native language will be printed underneath the symbols.

But the greatest advantage of such a chart would be the following: it would become obvious, that it is senseless to talk about the whole complex Democracy all at once (as it is done nowadays). Instead we would see, that we can only discuss one element after the other. In fact the words "democratic" and "undemocratic" might well disappear from our talk. They are too sweeping terms, too vague in meaning, as to mean anything. Any boy and girl could see this.

If we could draw up such a formula, which could be read in different languages, which would have the same meaning for the boys in Teheran, in Bogota or in New York, which could show the differences in the different democracies, why such a formula may have the most profound effect on the thinking of the people, and the mere shouting of slogans may cease.

Now, some readers, fervent adherents to one or ^{an} other political ideology, would have little difficulty in pointing out that the formula ^{written} drawn up, leaves out so many details, which are important; and they would or might soon sneer at the whole idea. "Go back, to your retorts, chemist and leave politics alone!" they would tell me.

However, I might point out, that I must have some say in the matter. If the politicians bring about a war, they force me, either into the trenches or ^{into} the making of explosives, etc. So I must teach them a lesson - in chemistry, namely:

Every formula can't tell all there is to be told about a certain chemical.

If a chemist draws up a formula, it tells something. If you demand more details, he can draw up a more elaborate formula, which would tell more. If you demand further details, he will draw up an even more elaborate formula, and might make a three dimensional model, and put in more and more details. But he can't tell all about it. Nobody can do this.

Politicians wrote heavy volumes about the meaning of Democracy. Chemists, too write heavy volumes about one chemical. But chemists have so far, agreed upon a language ^{of chemistry}, in which certain words and sentences have the same meaning for chemists of all countries. Politicians even of the same country, talk and don't understand each other.

So, in order to stop the ridicule which some people might pour out on the following formulae for democracy, herebelow is an explanation how formulae work.

We ^{draw up} shall ^{draw up} the phonetic formulae (built up with the elements of the alphabet) and the structural formulae for chemistry, and the geometrical formulae with which we are familiar. This will show us too, that the symbols of semantography fall into ^{class of} the geometrical formulae. The paragraphs below are divided by a vertical line to show the similarity. A student asks questions, and a teacher answers.

Student: "What means G-r-o-s-v-e-n-o-r ?"

Teacher: "It's the name of a mansion."

Student: "Can you use another writing which would tell more about it?"

Teacher: "Yes, in symbol writing, called semantography, it is written:



Student: "Oh, I see, it means a house, having a basis on the earth, walls and a roof."

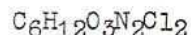
Teacher: "Correct, you have recognized the elements in the symbol."

Student: "What means S-a-r-a-z-i-n ?" *

Teacher: "It's the name of a drug."

Student: "Can you use another writing which would tell more about it?"

Teacher: "Yes, in a scientific symbol writing it is written:



Student: "Oh, I see, it means a chemical compound, having 6 Carbon atoms, 12 Hydrogen, 3 Oxygen, 2 Nitrogen and 2 Chlorine atoms."

Teacher: "Correct, you have recognized the elements in the symbol."

*Note: Name and formula are invented to suit the comparison with the house example.

A COMPLEX HOUSE, AND A COMPLEX CHEMICAL IN SYMBOLS

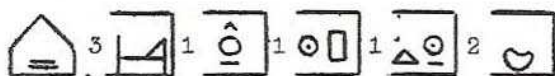
Student: "Can you tell me more about the formula?"

Teacher: "Certainly, In this particular case the formula can be written more elaborately starting with



Student: (interrupting) "Oh, I see, it means a house with three floors."

Teacher: "Correct, and we may write in one line more details:



Student: "Oh, I can distinguish the different compounds in this line."

Teacher: "All right. Read it, but use the Greek terms for the numbers; mono = one, di = two, tri = three."

Student: "Tri-floor house, having tri-bedrooms, mono-dining room, mono-reading room, mono-kitchen, di-bathrooms."

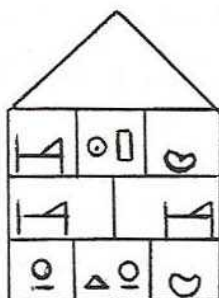
Or we may put the word house at the end, and say: Tri-bedroom, etc. house.

I have distinguished the various compounds: room + bed = bedroom, room + feeding = dining room, etc.

Teacher: "Very good. You have used first the Romance word order: 'House with 3 bedrooms, etc.' and then the Teutonic word order: 'Tri bedroom-house'. In Chemistry too, the most important word comes last. (see 102

Student: "Can you draw up a more elaborate structural formula?"

Teacher: "Yes."

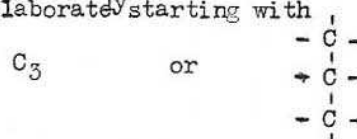


Student: "I can read this structural formula like a chemical structural formula:

1 (ground floor) mono-dining room, mono-kitchen, mono-bath room;
2 (first floor) di-bedrooms; 3 (sec. floor) mono-bedroom, mono-reading room, mono-bath room - HOUSE.

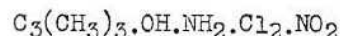
Student: "Can you tell me more about the formula?"

Teacher: "Certainly, In the particular case the formula can be written more elaborately starting with



Student: "Oh, I see, it means a compound of propane having 3 Carbon atoms."

Teacher: "Correct, and we may write in one line more details:



Student: "Oh, I can distinguish the different compounds in this line!"

Teacher: "All right. Read it, but use the Greek terms for the numbers; mono = one, di = two, tri = three."

Student: "Tri-carbon compound, called propane, having tri methyl groups (CH₃) etc. Or we may put the word propane at the end and say:

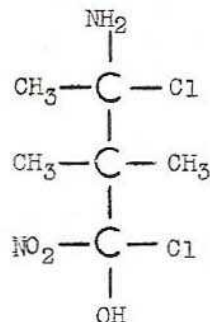
Tri-methyl, mono-hydroxy, mono-amino, di-chloro, mono-nitro - propane.

I have distinguished the various compounds CH₃ called methyl, OH = hydroxyl, NH₂ = amino, NO₂ = nitro.

Teacher: (see remarks about word order on left)

Student: "Can you draw up a more elaborate structural formula?"

Teacher: "Yes."



Student: "I can read this formula:

1 - mono-nitro, mono-hydroxy, mono-chloro
2 - di-methyl, 3 - mono-methyl,
mono-amino, mono-chloro - PROPANE

Student: "Now I can see where the different rooms are situated in the house, just as I can see where the different chemical groups are situated in the whole compound. These structural formulae certainly tell more about the structure of the house and the chemical than the former formulae."

Teacher: "Yes. And we can draw more and more elaborate formulae. The last formulae, for instance, are to a certain extent ^{still} ambiguous. They do not show, where certain rooms are situated, at the front side or the back of the house. Similarly, the chemical formula could mean two or more chemicals, in which the groups could be differently placed, although still on the same floor (carbon atom). We would have to make a three dimensional model of the house, and a similar model of the chemical compound, and we could still draw up more and more details, about the arrangements of the molecules and atoms as a lattice, of the various positions, with regard to the electrons, and protons, etc. etc. In fact, a whole book could be filled just with structural formulae and explanations about this chemical only.

Similarly, I could draw up a whole book, showing only the geometrical details of one bathroom only with all measurements, down to the last screw and bolt.

And, the more and more elaborate formulae we draw up, we could never tell the whole story about all the details".

This conversation between the teacher and the student, should furnish us with the method how to go from one formula for Democracy to the next and more elaborate one. We may draw up a simple formula to show the students in the high school, and a more elaborate one for the students in the university and even more detailed ones for those who study political economics, and we would never be able to tell the whole story about all there is to tell about Democracy.

But we will be ^{at} a great advantage, compared ^{with} our present muddle. We shall at least see clearly about what detail we talk. And more - we shall be able to see, whether we deal with a clearly defined entity, chemical human beings, who ^{do} this or that action, or whether we handle an abstract term, with a very vague meaning.

I maintain that a great part of the ^{useless} speeches, debates and controversies which are at present going on wherever politically minded people gather, would be impossible in a coming generation, which ^{has} ^{been} trained along the lines indicated in the coming paragraphs.

At present, we have in politics the charlatanery which we had in chemistry. And just, as some alchemists really believed that they have the recipe for making gold - if only, they would be given a free hand - today some politicians really believe, that the verbal recipe, which they expound in hour long speeches, would bring the ^{gold} ^{age}. Those are the honest deceivers who deceive themselves and others, apart from those, who know what they are striving for: power.

The word Democracy is of Greek origin and resolves into the two components Demos, meaning people and cratos, meaning rule, power. The first component refers to clearly defined chemical THINGS, the human beings within a community. The second component, however with its synonyms, rule, power, govern, guide, lead, etc., has a very vague meaning and refers to mind reactions performed by certain minds and influencing other minds. This is indicated in the symbols.



citizen
(man or woman
on territory; see pp. 342 ff.)



group
many



nation
very many



thinking
mind



forward



to guide, lead,
govern, rule, etc.

Consequently, Democracy means:



People
Demos



rule
cratos

The reader is asked kindly to peruse the chapter on p342 about the difficulties of drawing up a symbol for nation. For the chemist-linguist the symbol indicates very many humans on a territory. In the mentioned chapter, more elaborate formulae are explained.

Now, few people know Greek, and understand what the terms Demos-cratos mean. The words

and to-morrow quite differently.

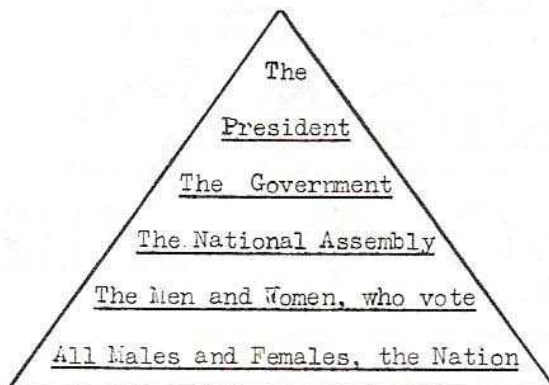
But this uncertain and vague state of affairs refers ^{not} only to one mind of one single person. In the formula we see many and very many minds. If we assume a small nation say of 10,000,000 people, we have so many million people with so many millions of minds, all thinking differently from each other and differently today, from yesterday.

Keep this term: Variable in your memory. We will need it later.

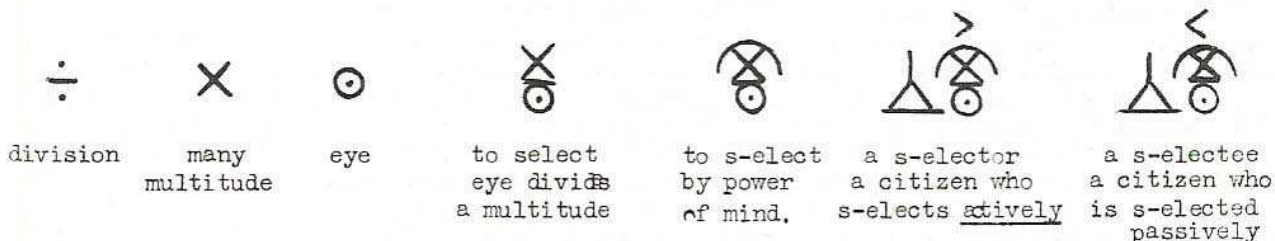
Now, this variability of the various minds of the people must be taken into account. We know, that different opinions result in different candidates and different parties. Who then, rules the government?

The answer would be the majority. So, a more elaborate formula would have to include this term. But the word majority indicates a fraction over 50%. In different countries different percentages are in use. Sometimes no majority is reached. Then a coalition must be set up, etc., etc. All these items are details, which are important, when we discuss the various democracies on this planet.

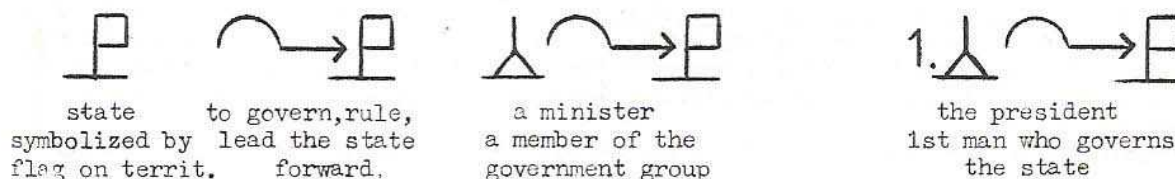
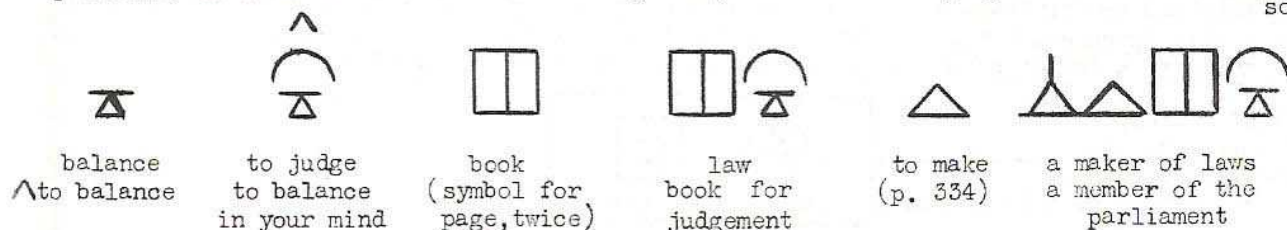
Now let us draw up a more elaborate formula of democracy to serve as a model formula. It will have the shape of a pyramid. So you'd better start reading from the bottom of it.



Now let us assume the simplest structure. The voters select the deputies. They ^{in turn} select the government ministers, and they in turn select the president. Before we draw up such a structural formula for a democracy we must construct our symbols.



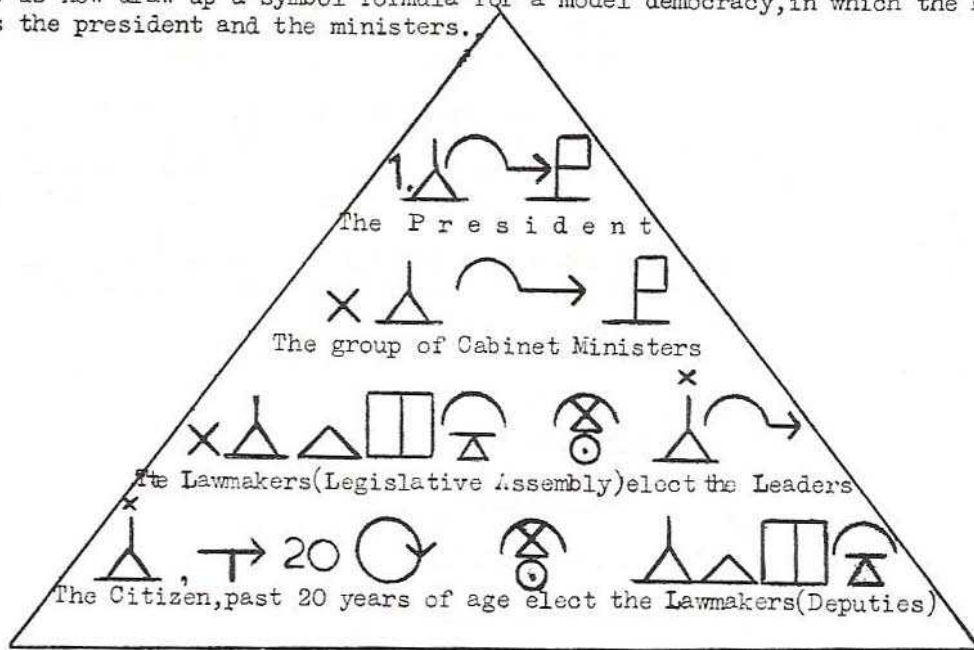
We can call the deputies "selectees", but we could choose a symbol, which tells what they are doing. They constitute the so-called Legislative Assembly, that means they are the Makers of the Laws. The Laws are then laid down in books, which form the basis according to which judges do the judging and carry out the judgements. This refers not only to criminal law. If you evade tax payment, if you export without a licence, if you disregard the laws concerning foreign exchange, etc., etc. your doings are first judged by a man in a department, and under certain circumstances you may come before a judge and even sent to prison.



CENTRE MEANINGS AND GROUP MEANINGS OF A DEMOCRACY

The symbol of the Government, the group of men who form the Cabinet, would then carry the group symbol $\times \wedge$ indicating many men. The Prime Minister would then be the 1st man of this group... In this way we could easily symbolize anybody occupied with the affairs of state.

Let us now draw up a symbol formula for a model democracy, in which the National Assembly elects the president and the ministers.



Now, look at this formula closely and you will notice that the mind symbol appears in every line. We see that in this structural process of electing and governing there are a great many minds involved. Precisely, the minds of the citizens who voted, the minds of the deputies, and the minds of the ministers and the president.

Now, remember a little mathematics from your school days. You got equations with some "unknowns", usually indicated by an x, or y or z, etc. Later on we shall see that these are called "variables" in certain equations. Now, we can safely say, that the minds of the citizens who went to the polls are so many "unknowns" and "variables". Remember the re-election of President Truman, which the great mind-readers and prophets thought impossible.

If 30,000,000 voters went to the polls, there were just 30,000,000 "unknowns" or "variables" involved in this structural process of Government of the People.

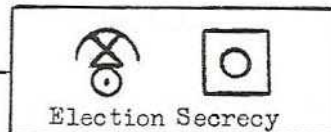
But then there are the minds of the deputies and the ministers. They may change their minds any day. They may amend the Constitution and do things, which their selectors never wanted them to do. These minds represent "unknowns" and "variables" throughout the whole term.

But we shall soon see, that all these minds, depicted above are not the only ones, involved in the structure of a Democracy.

Now, such a model formula for a Democracy may be explained to boys and girls, say of 13 years of age. A few years later, the formula would become more formidable, just as in their chemistry learning. They would learn of more details, of their inter-relations, and their qualities. Just as inorganic chemistry, they are shown various formulae, which look similar and are similar, except for some special property, accounted for by a certain group. They will learn about various democracies and their special properties.

Here are a few of such details, symbolized in the form of a sentence.

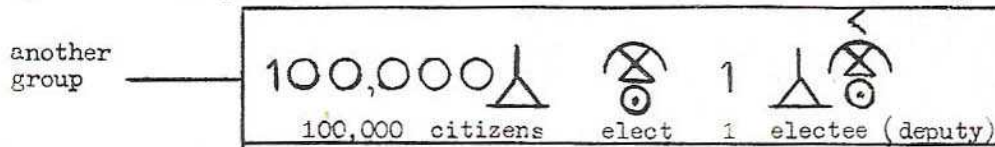
A group symbol attached to the above shown structural formula of a Democracy



A very important group. You can almost discern the polling booth in the symbol, your eye, scanning the list of many, and your closed mouth, when you come out. In Hitler Germany there were secret elections, with polling booths, and all that. But you were informed, that you are allowed to say openly that you are with the Fuehrer. If you choose to disappear behind the booth, then you were marked. Millions chose not to disappear in order not to disappear later on.

Unfortunately, in some trade unions (the people who fought once for secret elections)

secret ballots are frowned upon, and this has in some cases marked effects. Many who disagree with the policy of their union leaders are afraid to say so openly, in order not to lose their livelihood.



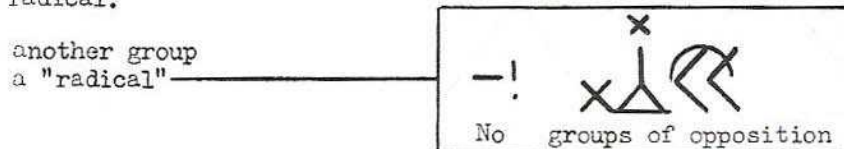
In some democracies, the number is different. In Russia for instance, 25,000 industrial workers can send 1 deputy into the Legislative Assembly, whereas the people in the rural areas can send one for 125,000 rural inhabitants. If decisions are made according to the number of the deputies, the workers have a great advantage over the peasants.

Another group symbol would indicate the proportional system of counting the votes, whereas another group symbol may indicate the simple majority vote counting. The students would soon realize, that a minority can send a deputy, because he got just a few more votes than the candidates of other parties in this district.

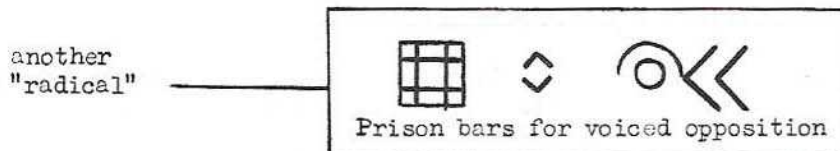
Other group symbols could be added. But now, as we are slowly building up a complex formula of the structure of a democracy, we may start using a chemical term.

On page 482 we have seen the hexagonal structural formula of benzene. The upper Carbon atom has been connected with different groups OH, or NO₂, or CN, or NH₂. Now, such groups are called "radicals" in the language of chemistry. Different radicals change the properties of a compound fundamentally, radically. The radical NO₂ you will find in many explosives. It is called nitro-. Take harmless glycerine and insert 3 nitro groups and you get nitro-glycerine.

In our structural formula of a democracy we have to add radicals, which radically alter the whole structure. Two radicals have been shown above. But there are others even more radical.

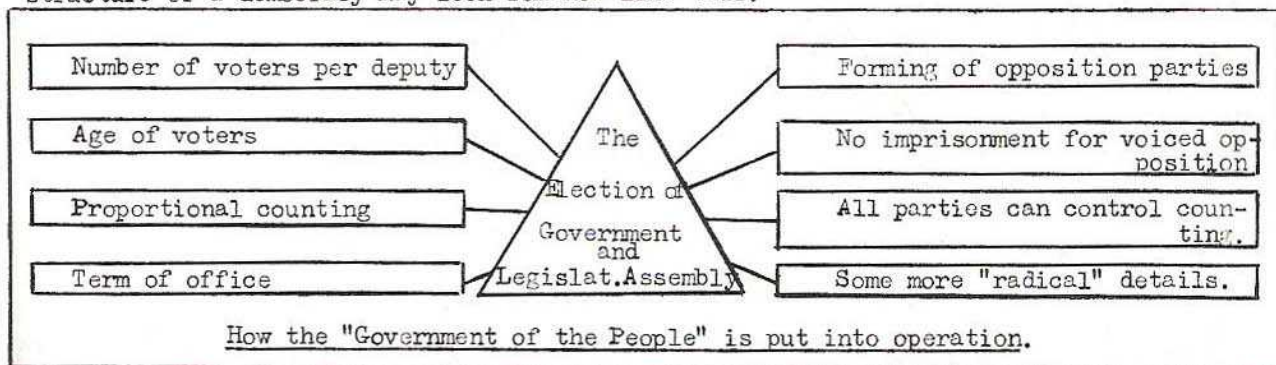


Such a group attached to a democractical structure of a nation may change radically the whole structure of that Democracy. Even more dangerous is the following radical.



Such a "radical" changes radically the properties of a democracy. In fact, we may doubt, whether we should call such a structure a democracy. There are thousands of chemicals, which have in their structural formula the benzene ring. There are benzene derivatives, but their properties are so different from those of benzene, that the term is almost misleading. There are democracies, which show in their structure the application of elections and all that, but one of those "radicals" attached to it, and we have something very different.

A chart to be hung in the class room or the community center, showing the structure of a democracy may look somehow like this.



An abridged specimen of a chart for schools

CENTRAL STRUCTURE OF FRENCH AND AMERICAN DEMOCRACY

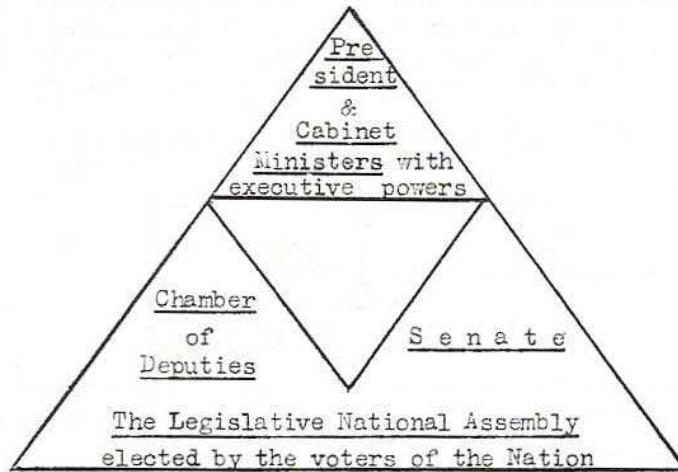
Such a chart should give the students an idea of the working of a Democracy. The teacher would have no difficulty to tell them, that they have to study a lot more of important details, and he may let them have a glance into the textbooks of government organizations, etc., which the students use at the university.

On the other hand, the chart, scanty as its details are, gives the boys and girls an idea of how to organize their own clubs and societies, and later on their trade unions, cultural and other citizen associations.

In a higher class, the pupils may study more elaborate structures of the actual Democracies in operation on our planet. Some scanty outlines of such formulae are given below. Not more can be given in this book. The written lines should be in semantography and with the native words beneath. For instance, the "democratic structure" of say Sweden would be printed with the words in Swedish beneath the symbols for study in Swedish schools. But the same page could be studied by French school boys and girls, who would read the lines in French. It wouldn't matter, if the Swedish compiler of the formula had put in so many high-sounding words to laud this particular Democracy. The pupils would be aware of the vagueness of their meaning, and besides of "unknowns" and "variables" in the formula.

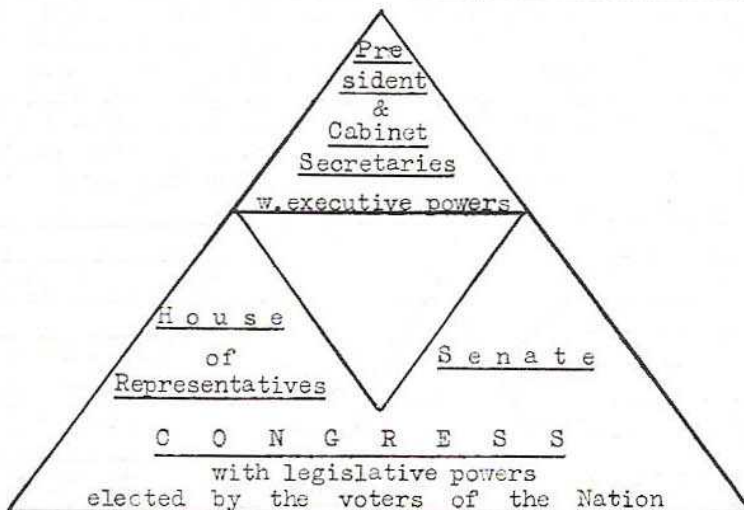
The following scanty outlines do not deserve the criticism of conscientious readers. These outlines should only indicate what could be done in this field, and how semantography could be used as an advantage to bring understanding to people of different languages.

Outline of the structure of French Democracy



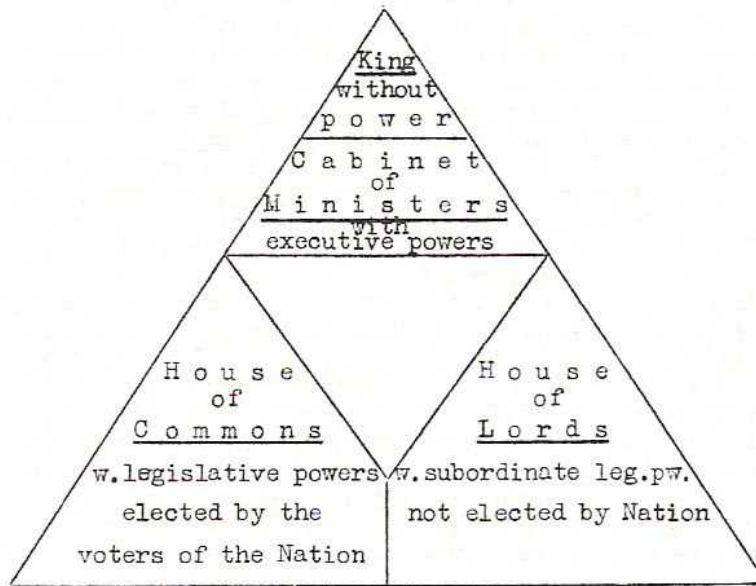
Under what conditions the elections are held should be outlined by another structural formula, as shown on the previous page. Other details would warrant further formulae.

Outline of the structure of United States Democracy



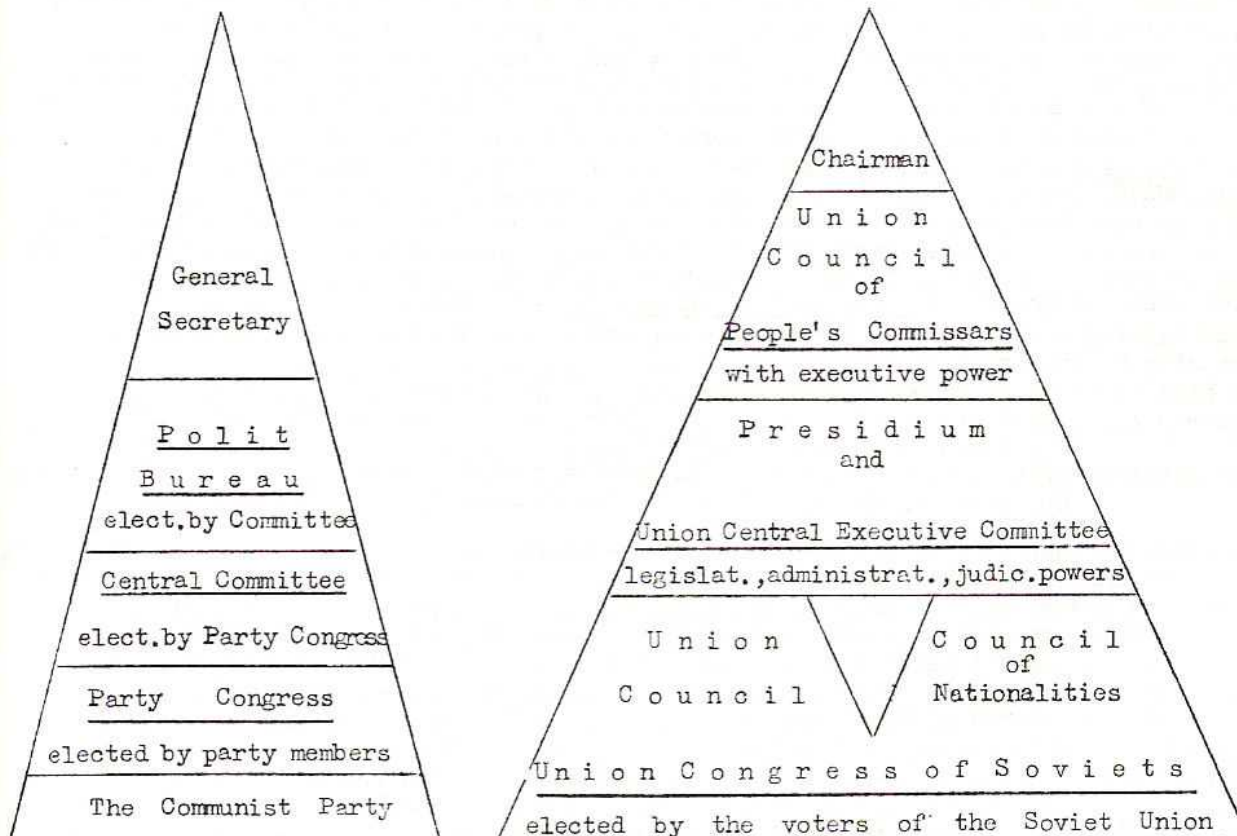
If someone should belittle these diagrams he should remember the simple structure charts of the anatomy of the human body, which school children study, and the more elaborate charts for students of medicine and others, even more detailed, which doctors study.

Outline of the structure of Great Britain's Democracy



The members of the House of Lords can hold up a bill for 2 years. The members of the House of Commons are now making efforts to reduce this to 1 year only. This detail in the structure of British Democracy does not show the principle of "election by the people," the basic principle of the whole structure.

Outline of the structure of Soviet "Democracy"



No opposition parties allowed in Soviet Russia
Deputies must be either communists, or non-communists which are approved by the party

(488)

Now, if we take a close look at the fundament of the pyramid, we find there an outer group, a radical, of "radical" and "fundamental" importance. Many intelligent people believe, that this "radical" changes the properties of Soviet Democracy so much, that it cannot be termed a Democracy any more. Many intelligent people, however, claim that this detail is not of "fundamental" importance. Needless to say, that fundamental is an adjective and importance refers to a mind reaction. But even if we say fundament, readers of this book will tell us, that we are using a metaphor. Fundament means something real, a lot of chemical THINGS, if we build a house. If we apply this term to Democracy we make an abstraction in our heads. What we think "is" the fundament of Democracy, others consider only a minor detail on the facade. These people will resent the drawing, in which it is placed at the fundament of the pyramid. People from the other side will accuse me of false representation. I should have put the pyramid of the Communist Party on top of the other pyramid. The General Secretary of the Polit Bureau of the communist party is on top of all the other tops. Communists will accuse me of false representation in regard to the other Democracies. I should have put "Big Business" on top of the President of the United States. And so, the argument will become "hotter and hotter" without one party being able to convince the other party in the least. Western Democrats will maintain, that Soviet Russia is "undemocratic" and Soviet Democrats will claim, that only their system is "truly democratic." Well, we know that democratic is an adjective... but we must find a solution.

Now, people, when arriving at an adjective, and are sensible enough, not to shout, but to argue intelligently will do one thing: adopt the attitude of the chemo-physicist, and start measuring and comparing chemical THINGS and their physical ACTIONS. So the friends of the Soviet Union will tell you of all the good THINGS the Soviet worker gets: food, accommodation, work, theatre, vacation resorts, etc. etc. The Western Democrats will do similarly. They will tell of the THINGS a worker in the United States gets, etc. etc.

But in this chapter we are only concerned with the structure of how the citizens get a say in the running of the state. This means elections, representations, etc. We shall deal with the good things of life in another chapter

Western democrats are at a loss to understand how communists could call their structure "democratic". But the explanation is simple. The communists being tired of being called "autocratic", "dictatorial", etc. simply turned semanticists. What does the word ^{ing} "democratic" mean?

"It means", say the western democrats, "Government of the people, by the people, for the people." "Then we have it," said the communists, "our people elect their representatives, who come from the people and work for the people. Look at the pyramid. One council elects the other, up to the top." "Correct", would the non-communist say, "I honestly believe that your election campaigns, elections and counting, are conducted in honesty, but you give the people no choice to elect deputies who oppose the government. This is fundamental."

"It is not. Besides, the peoples of the Soviet Union are not yet fully educated. There are men who ^{misses} would /, what you call "freedom of speech". They don't know yet, what's good for them. Up to that time, we must tutor them. Besides, there are enemies of the Soviet peoples!"

So we are again at those words "good" or "bad". Are opposition parties "good" or "bad"? Is the freedom to criticise "good" or "bad"? We shall see in the following chapters the formulae for the words opposition, freedom, critic, etc. and hear more about it. But we know already that they will carry the mind symbol, and their meanings are evaluated differently by different minds.

What can people do in a Democracy?
So back to chemical THINGS and their physical ACTIONS. There is the joke on record: American citizen (to Soviet citizen): "I will tell you what "Democracy" means. I can go to Mr. Truman, shake my fist in his face and say: 'To hell with Truman!'"
Soviet citizen: "If this is the meaning of "Democracy", then we have it too. I can do exactly the same thing. I can go to Mr. Stalin, shake my fist in his face, and say: 'To hell with Truman!'"

And here we must go back to our chemical formula. When we add a nitro-group to our compound, we should know that under circumstances, we might have an explosion. And to avoid this, we must insert another group, which would change the properties of the compound.

If we add the group: "No opposition parties" ^{allowed} to the structure of our formula for Democracy, we must expect minor and even major "explosions" (in which real explosives might be used) To avoid this, we must add another group: "Imprisonment for voiced opposition." We have drawn up this formula on page 489 and shows a real chemical THING: prison bars. And prison bars are "bad", and this can again be "translated" into chemical THINGS: no chicken and no pork, no bananas and no oranges, no theatres and no cinema, no outing on Sunday, and no vacation, no mother and no father, no wife and no child; and physical ACTIONS: very hard work. We can replace very hard by measurements in meterkilogram.

The lesson which this book on semantography tries to impart is, that it is possible to translate all those vague meanings into concrete ones, that means concrete THINGS and their ACTIONS. "Freedom of Speech" and "No opposition parties allowed" could thus be translated in a way which anyone could understand.

No matter how much western democrats and communists may argue, they will agree with the chemo-physicist: once you don't permit something, be it opposition parties or the evasion of inheritance taxes, you must set up a group to enforce this: police, judges and prison cells. So we have to add another group to our structure of Soviet Democracy: "Prison bars for voiced opposition at elections". But this formula still contains the vague meaning of opposition. How much? What yardstick? Who is going to measure it?


Communists will point out that criticism is permitted in the Soviet Union, provided... but we will tackle this in the chapter on the "rights of the citizen". Here we are concerned with the building up of Democracy, the machinery of elections for setting up a government of the people.

Now, when we take a look at our formula for Democracy (Western or Soviet) we notice the mind symbols in every line. We have the mind symbol in the meaning of to elect, and we have it in the meaning of to govern. Now, another group symbol may tell us (p. 489): "Term of office 5 years" That means, that the minds of the electors will be at work, only once in 5 years. The minds of the governors, however will be at work in this compound for 5 years. If the electors stick to the rules of the game, they can do little during this time. On the other hand, the governors are supposed to work in the "interest of the people" in every Democracy.

This term "interests of the people" plays such an important part, that we must draw up a symbol for the meaning of "interests". The word as it stands doesn't indicate a particular chemical THING or a particular ACTION. Consequently it falls into the third group: human EVALUATIONS, meanings in our heads. Nevertheless we will do our best:



PLUS
Addition


mind  <  
Interest of the People.


the Addition
the added THING

We should not be surprised to find that the basic symbol in the meaning of "interest", the PLUS symbol, is to be found in our symbol for banking interests (p. 253). If we assume the nation to consist of 10,000,000 voters, we have just 10,000,000 different interests, to say the least. And each of them, the farmer, the worker, the teacher, the manufacturer, the soldier, the clergyman, the musician, the philosopher, each of them, want a particular PLUS, and they adopt the attitude of the chemo-physicist and tell you exactly the chemical THINGS and the physical ACTIONS which would mean "fostering their interests", a PLUS in money, irrigation dams, weather stations, a PLUS in wages, cafeterias, buses, hospitals, sick pay, vacation pay, a PLUS in school rooms, libraries, research stations, churches, philharmonic orchestras, universities, guns, battleships and even a PLUS of tax reductions. "Interest" in the widest sense means an addition, a PLUS.

So the member of parliament, deputy, representative, senator, etc. has to see his electorate, constituency, etc. or they go to see him about their diversified interests. They do this usually in the anterooms, which sometimes are called lobbies. Let's draw up the outline of a lobby, say with columns and arches in the Roman style.


house
ACTION ^ to house


lobby
ACTION ^ to lobby

 
individual mind

This symbol of the lobby is a joke of course, but it helps us to understand what is going on. Those lines outlining the lofty halls with arches and columns, carry another meaning for us. We see the individuals, standing together, and we see even the minds in "close touch" with each other. We see even the go-between, who arranges the "influencing". And we may realize, that lobbying is going on everywhere, in the halls of the parliaments, as well as in the private offices, in the country clubs and at private parties, in Washington, as well as in Moscow, in Paris and in London, and in any other place, where the government of the people is put into action. It may be the smallest village. Its local government, with mayor and alderman, works on the same principle.

Now, all this explaining in this chapter should have a practical value for each of us. We work together in factories, and offices, and live together in cities and homes. Almost every day we have a short or lengthy discussion on politics. And more than often a single word makes an enemy of a friend. I maintain, that a great many of our fruitless debates would be impossible, if we would know something about semantics.

On the other hand, we should not abandon debates on politics. On the contrary. But we should advance from the stage of mere slogan shouting to a more sensible attitude. Once we have learned of words with relative meanings or vague meanings, and how they are evaluated differently in different minds, we start to "handle with care" such words. And then we may really get somewhere; the chemical THINGS and the physical ACTIONS which we want from our Democracy, we may get them in the end.

Now, here is an opportunity to insert a few paragraphs on mathematics, or call it mathematical logic, suited to be understood and practised by anybody with some school education. It's simple, if you read it with some attention.

The mathematician uses all kind of symbols for his abstract entities. Sometimes he handles entities which are similar, yet different from each other. These he symbolizes as follows:

$a_1 \ a_2 \ a_3 \ a_4 \ a_5 \qquad b_1 \ b_2 \ b_3 \ b_4 \ b_5$

He has simply numbered all the a's, and all the b's. The a's are similar, yet they show differences enough to warrant different numbers.

Korzybski has used this trick of the mathematicians to number and differentiate different individuals.

$John_1 \ John_2 \ John_3 \qquad Jim_1 \ Jim_2 \ Jim_3$

and he states

$John\ Smith_1 \ \underline{is\ not} \ John\ Smith_2$

Now, this seems so obvious, that we almost resent being told such common-^{things}place. But what we don't realize right away, is the other consequence:

$John\ Smith_1(\text{of today}) \ \underline{is\ not} \ John\ Smith_1(\text{of yesterday})$

Now we don't need the biologist to tell us, that our cells are changing incessantly. We know from our own experience, that a decision we make ^{to} today, an experience we have, a private talk, may change our destiny; we may be a different person ^{today} than we were yesterday. Korzybski urges therefore, that not only a mathematical number should be attached to an individual, but also the space and time dimensions.

$John\ Smith_1(22-11-1948, \text{Adirondaacks}) \ \underline{is\ not} \ John\ Smith_1(21-11-1948, \text{Manhattan})$

Well, again a plain thing. Mr. John Smith has a ^{different, a} changed mind today in the beautiful forests of the Adirondaacks, than he had yesterday in his Manhattan office.

Commonplace as this may seem, people will attack each other, saying: "Remember, what you said yesterday? And now... You are inconsequen^{at}t." Well, sometimes we really did change our mind on the same subject (that we shall buy that book for instance, although yesterday, we decided not to do it). But in most cases, such assaults and retorts are based on a vague word to which different meanings were attached yesterday, than today. Or different details were discussed yesterday than today. "Remember what you said yesterday about Democracy? And now... You are inconsequen^{at}t."

So, following Korzybski we should write:

$Democracy_1(\text{Great Britain, 1943})$

$Democracy_2(\text{France, 1943})$

But even this would not be sufficient. A single emergency law passed today, changes the whole compound meaning:

$Democracy_3(\text{United States, 22nd November 1943}) \ \underline{is\ different\ from\ yesterday.}$

Now, take an intelligent person, who is interested in debates which should lead to agreement and understanding. He reads this page carefully and thinks it over. I believe that he might not use any more such sweeping expressions as: "Democracy is this, and Democracy is that." Instead, he would ^{remember} the index numbers, space and time dimensions, as shown above, and he would remember the complex formula of that particular Democracy (French, British, Soviet, yesterday, today, ten years ago) and would try to grasp the circumstances of one particular detail.

And now a little bit of mathematical logic, which will help us in thought and debate. Here are a few explanations which should help us to understand what Bertrand Russell did with his application of the "propositional function".

Now, don't be afraid. A proposition means a statement. If you say "Nice day, today" this is a proposition, and the logicians will dissect and analyse it. But what is a "function" in mathematics? Again, this is simple to explain.

Just think of two cogwheels on a lathe. They function together, each one depending on the other. When we exchange one wheel, we get a different movement. We can exchange both wheels and get again something different with each different wheel. In short: we can vary the wheels. They are our variables, but so are the resulting movements, etc.

Now remember a little equation from your school days.

$$x = y + 1$$

Now this equation contains two unknowns x and y. You may remember that to resolve equations with 2 unknowns we need 2 equations. If I give you the second equation

y = 1	then you will tell me immediately that	x = 1 + 1 = 2
	and if I give you another value for y	
y = 2	then you will tell me immediately that	x = 2 + 1 = 3

So you see that I can give you innumerable different values for y and for each value of y there will be a corresponding value for x. Both x and y are depending on each other and functioning in a certain relation.

But suppose I do not give you a second equation. You are faced with the first only

$$x = y + 1$$

Then you cannot solve the equation. You know that both unknowns function together, are depending on each other in regard to their values, but they are variables. We can vary the value of one variable and we will get a number of varying values of the other variable. That's what mathematicians call a "function", and they denote this meaning by a general statement

$$x = f(y)$$

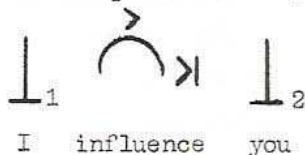
which reads

x is a function of y

or in simple language: x functions with y according to a certain relation. If we vary y then x will be varied too.

And now let us adopt this mathematics to statements in semantography. I hope that Bertrand Russell will forgive this adaptation and oversimplification.

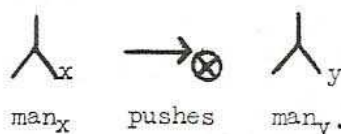
Suppose we write down



I could have written: One individual influences other individual, but I preferred to put you and me, to show you that even so, we are still variables. The particular function is expressed by the term influence. I influence you is one propositional function. I attack you is another function.

But if we change one variable and say I influence him (a third individual) then we would get different results. If I tell you that you are a lazy-goer, you will function in a certain way. If I tell a third person that he is a lazy-goer, he would function differently. And if I tell you the same invective to-morrow, you may again function differently. You (today) have not the same mind as You (to-morrow).

But I have used a too complicated proposition, one which carry the mind symbol. Let us make a simpler propositional function.



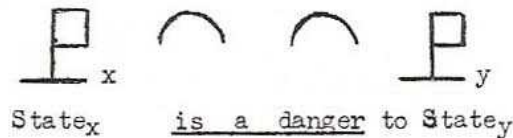
Different men have different weights and different strength. A forward movement might result. But more we can't say. We have no specific data as to weight, ^{strength, etc.} to insert in our function.

And if the propositional function shows the mind symbol, than a super-variable is indicated. To push means a simple physical action. To influence refers to a sense re-action.

DEMOCRATIC MATHEMATICS DOES NOT MEAN A DEMOCRACY

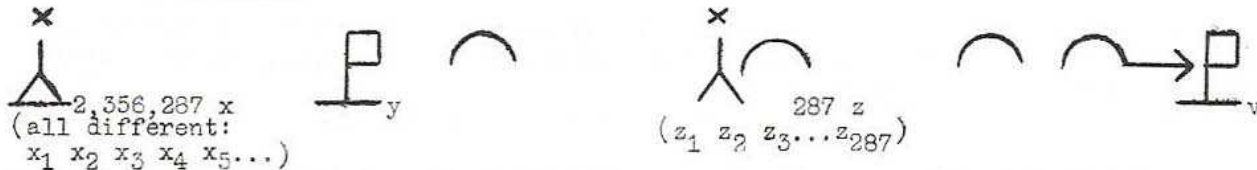
So we may say in a general way that a propositional function is a statement which contains variables. This is a far cry from what Bertrand Russell put into this, but it may serve for simple people, like ourselves, who have no time to delve into books on logic. We the people need logic every day. It means survival in a world like ours.

Now let us write down a few propositional functions, which carry the mind symbol too. First that statement of Hitler (p.449), in a general form. We shall only symbolize the important terms.



Now we may take the y-state to be say Greece. Then we would have a variety of states which might be a danger to Greece. But the super-variables in the statement above are indicated by the mind symbol. Every mind would evaluate differently, and differently today than to-morrow. But when hearing ^{Hitler's evaluation} millions of times, the majority of a nation would believe it, to be a true statement with a fixed and concrete meaning (which is it not).

Now here is another statement:



The Citizens_x of the State_y elected today their deputies_z and became a Democracy_v (numbering 2,356,287 persons) (numbering 287 persons)

This statement shows that 2,356,287 different individuals_x of a certain State, indexed y, elected 287 different individuals_z as their representatives, and thus their State_y became a Democracy, indexed v.

And now let us take 3 different States, indexed y₁ y₂ y₃ and let us assume that in all three states the same numbers of voters go to the polls, to elect the same numbers of deputies, according to the same election principles (same age of voters, proportional counting, even similar parties, conservative, liberal, socialist, etc, etc) then we should get a very similar Democracy in each of the three States.

Well, let us apply this mathematical formula to practical situations. Let us put in the three different values for y and let us see what happens to x and z and v.

- y₁ = Great Britain
- y₂ = Roumania
- y₃ = Iraq

Then we get

2,356,287	British voters elected	today	287	Britons as deputies, and became thus a Democracy.
2,356,287	Roumanian voters	"	287	Roumanians as deputies " " a Democracy.
2,356,287	Iraqian voters	"	287	Iraqians as deputies " " a Democracy.

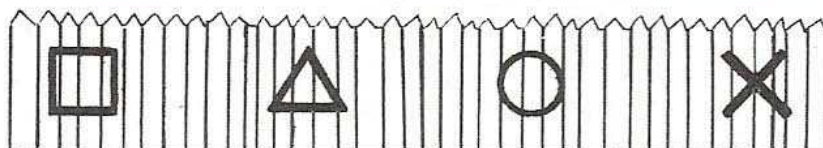
No comment is necessary. One should believe that anyone would know that these three Democracies would be different from each other as (to use a metaphor) daylight is different from the dusk of the evening. Yet, we read almost every week in the papers, that now this and now that state has achieved self-government and thus has become a full-fledged Democracy. If there are complaints, they may come from say a Western state, declaring that the elections have not been held according to democratic principles. This statement is usually denied by the elected government. If, however, foreign observers are admitted to the elections and they have not detected any violence or coercion, then all is well and a new Democracy is born. The democrats in the other countries can go to sleep.

The above functional statement contains one reference in regard to the birth of that Democracy, which reference we have overlooked so far. It refers to time: today it is said. To-morrow all is different. The democrats wake up to find the Reichstag on fire, Jan Masaryk fallen out of the window, etc. A few years later, your boy takes leave of you, to go to be killed, and all is done according to democratic principles.

Now, let's forget for a while non-European countries. In some of those it usually happened that rich merchants, self-appointed generals or better "generalissimos" set up a government and some kind of assembly and claimed "self-government". We shall not translate the meaning of self into semantography.

Let us consider European Democracies, say Switzerland and Roumania. I have been many times in these countries. In Switzerland, it was for me a constant source of wonder to see people of 4 different cultures and languages living together. The parent countries Germany, France, and Italy ^{were} at frequent ^{vars} inter-war with each other throughout the centuries. Yet, the male Swiss, be his language and culture German, French, Italian, or ^{Latinian, he}, has his full military equipment at home, the rifle, munition, etc. The Government trusts them, and know that they will be ^{of the} in arms in a few hours to shoot at any invading army. But who is the Government? Do you the name ^{the} President. Now take Roumania. Compared with the self-confident, almost rebellious and sometimes even arrogant attitude, ^{some Swiss people} the Roumanian peasant and shepherd is kind hearted, good natured, willing, obedient. They too are a Democracy and they too go to the polls. I have been many times in Roumania. I have been in Pompeii too and have looked in wonder at the election slogans of 2000 years ago, still visible on the walls, dug out from the ashes of Mt. Vesuvius. But in modern Roumania with compulsory school education they look like this:

Election "slogans" on village fences in modern Roumania (about 1932)



These symbols have not a meaning as the symbols of semantography have. They only denote the various parties. In pre-war Roumania the parties had beautiful and lofty names: national-liberal, liberal-national, democrat-national, national-democrat, social-liberal, liberal-democrat, etc. etc. Roumanian is a Latin tongue, and these words are also used in Roumania. But for the peasant they are meaningless. And even those who can read, would mix up the national-liberals with the liberal-nationals. So, the parties resorted officially to symbols. The official ballot paper carried circles, squares, triangles, etc, and the voters were told by their speakers to mark that special symbol and all would be well.

I have no doubt, that the great popularity of the Peasant Party was partially due to the ^{Roumanian} simple name "Taranisti", which is derived from "Tara" the land, (Latin "terra")

Their leader Julius Maniu is now in prison - for life. He wasn't hung like the peasant/^{leader} of Bulgaria. He is still popular. But he is already over 70. He won't live long.

When Goga was appointed Prime Minister in 1938, he invented new symbols, which spelt doom for the other parties.

Goga's symbols for Roumanian democratic parties (1938)



Goga had such a small following. He could never attain a majority or even a substantial minority. So he resorted to a trick. The new ballot papers would have to be marked by the voters with strokes. Goga's party 1 stroke. The next party 2 strokes, etc. etc. He knew what he was doing. If the gnarled fingers of a peasant could achieve one stroke, this was something. But 2 or 3 or 4 strokes - no! Luckily enough, the machinery of Roumanian constitution still functioned without violence. The king recalled him.

Now, officially they have "true Democracy" in Roumania, and sure enough other symbols in the village fences. But woe to the man, who ventures to say, that the Democracy is "not true". But we know now that the word "Democracy" (or "true Democracy") as a sweeping term means so much, that - in the words of Ivor Brown - "it means nothing at all!"

And Ivor Brown gives us the solution to the problem.

"If the mass of the people remain receptive to any trash and utterly incapable of getting behind words to the things they should represent, people's power can never be realised. Power will remain in the hands of those who control the formation of public opinion.... There is only one force that can guarantee true democracy, and that is education.

By education we do not mean the study of textbooks or a diligent application to

mathematics. We mean the training of critical powers, the creation, if you will, of a healthy scepticism. So long as the many ^{are} worshippers of words, and do not realise that they are bowing the knee to empty symbols, so long will the word-wizards hold the throne. But when the majority begins to ask for the realities that lie beneath the symbols, for the facts that are hidden in the phrases, the translation into human experiences and human happiness of the magniloquent headlines of the papers, hope dawns for democracy." (79)

For Brown, certain words are empty symbols. He sees the solution of the problem by an education, in which the citizens are told to recognize the realities and the facts, which are hidden in the phrases. He wants "the training of critical powers, ^{the creation} of a healthy scepticism".

These last words, as they stand, are too vague in meaning to give any outline of the education intended. There must be a scheme along simple lines, which could be started in the primary school. A scheme, like the steps we are taught in language, writing, mathematics, chemistry, geography, something in which we could go from one class to the other.

We know very well, that the illiterate peoples (who have in the last 20 years or so, got a self-government) lack education and political training. Instead of some deposed old families, ^{new} families rule them. Sometimes the ^{new} ruling is more disastrous than the old has been. Almost nothing has changed for the better. The word "Democracy" has become a mockery in those parts of the world. It means to those peoples just another tyranny. Instead of maharajahs and pashahs, they have now prime ministers, secretaries or commissars. Sure enough, their propaganda department tells the people every day, that now the millenium has come or is "just around the corner".

Soon they will acquire guns, tanks, and airplanes in exchange for their products. Soon they will import machinery, blast furnaces and experts and they will start to make guns, tanks and airplanes. In, say 50 years time, or may be sooner or later, they will make war on the Western world and destroy the very people and the very culture which brought them self-government. There should not be any mistake about it. Either these people have no regard for the humans of other countries, or - if they are gentle - they will be misused by unscrupulous leaders who crave for power and domination.

If the Western world cannot instil in these people the idea that there is room enough on this planet for all of us, and that we can live in peace and friendship and exchange our material and cultural products as members of one big family, then the nations of the Western world will be destroyed by those "backward" people, and be it for the sheer joy of destroying something foreign. They will get the recipe for bombs. They will get it.

This outcry goes up almost daily from various books which appear in short succession. All the authors are aware of the grave danger which threatens "civilisation". All the authors cry for "education". But they can give only vague outlines about it. The reported breakdown of "democratic education" in the Western zone of Germany, and similarly in the Eastern zone where another "democratic education" is taught, the reported rise of ^{the} Nazis in Germany, the reported breakdown of "democratic governments" in other countries - all this tends to show, that we have not a scheme for education to ensure future peace.

"But," would sceptics say, "suppose we have such a scheme. The rulers in those countries will simply prohibit the teaching of it in the schools which they control."

If so many authors offer some solution of some sort, it wouldn't make much difference if I would join in. However, I shall try my best to approach the subject as a practical engineer would approach it. One thing I can say: I have not yet found a proposal which seems to be better. Otherwise I would say so. A practical engineer knows when another engineer has an idea which saves time, money, labour and shows other advantages. If one engineer can build a bridge, cheaper and quicker and of more strength than the old-time bridges, he will get the order. So, I may outline the building of the bridge which I propose. We are all convinced that the way to a better co-operation goes over education. This means ^{firstly} literacy. At present 75% of the people of this world, or 3 out of 4 cannot read and write. Inventing new alphabets, with special symbols for special sounds, printing books in so many languages (about 3000) seems a very difficult task.

Semantography, however, can be easily taught, even to primitives. It's actually a picture writing. The symbols show in most cases the outline of the real things. But, most important is the fact, that the natives everywhere read it in their native tongue. No matter how this tongue changes in pronunciation, the letters of semantography cannot become outdated. 50 years hence, they will still have the same meaning, just like Chinese charac-

ters 4000 years old have retained their meaning and can be read in different tongues by the Chinese peoples of today.

Books, newspapers, illustrated magazines, primers, and text books could be printed in one country, say in the United States, and then distributed in all countries of the world.

"Ha, there you are!" the sceptics would say, "the rulers of those backward countries would simply prohibit the teaching of semantography in their schools, if ^{there are} any."

True enough, ^{there will be} teaching of semantography in those countries which would not allow the influx of "Western Democracy" or "American Imperialism". What then?

Now, we assume for a moment, that the so-called Western states, or let us say only a few or only one, the United States have adopted semantography. Not for complicated writing, but just for some practical purposes.

A unification of highway signs on geometrical lines, is overdue. Let us assume that semantography is accepted for this purpose (see the proposal pp. 357 - 365). Sooner or later highway signs in all countries will be on such uniform lines. Even in those countries in which education lags. Then, the population will get acquainted with some of the symbol elements. Similarly, signs in public places, cinemas, stations, railways, ships, harbours, airports, etc., etc. will consist of symbol elements. And we know that most of them are almost self-explanatory - if you are told about them once. Clever people, and clever pupils in those backward countries will be proud to show their friends that they can read these signs.

Then we assume that semantography is used for sign plates on machinery, knobs and handles of apparatuses, directions on merchandise, signs on boxes and cases, etc., etc. We assume that Western manufacturers have found semantography practical. They would include in the boxes and cases a small folder, which would explain the symbols in different languages printed in columns alongside. Clever boys in the shops of those backward countries would soon learn more about how to read the symbols in their language.

Let us further assume, that pictorial magazines in the United States or elsewhere, would print a small line in semantography as a subcaption under some pictures. Some copies would make their way to those backward countries. Clever boys, who would realize that those lines could be read in their language, would set about it to solve those rebuses and charades. Why, it would be big fun.

Some of those boys would get employment in some oil refinery or factory. They would like to learn about it - ^{there are} but no textbooks in their language. But the boy's foreign engineer might get him a little text book from abroad, printed in semantography. He could learn oil drilling or some other science in his own backward dialect. You may be rest assured he will study the book by the light of his oil lamp in his hut.

Now, we may assume, that the men in power have forbidden the study of semantography in the schools of their backward countries. Some other rulers, however, may have found the textbooks in semantography, which they get so cheaply ^{try} from some Western country, such a big help in the training of native technicians, that they ^{might} have consented to its use.

But suppose, semantography and books written in this symbol writing are forbidden. Then the spread of its reading would be almost irresistible. It would be studied clandestinely, fervently, at least by those boys who want to know... and they are the leaders of to-morrow.

But, why should semantography be forbidden in such countries? Well, because the rulers, who have ruled with words and swords, might be afraid that the people would become aware of the vagueness of their slogans. Can they stem the tide? For a while, yes, but only for a while. If workers over the frontier are allowed to do this or that, then you can't stem this knowledge. And when it is forbidden, instills a craving for it.

But suppose semantography is discarded in favour of a better symbol writing. So much for the better. Here, for the first time, is a simple "chemistry" of language. If the local leader gives you a fine speech with high-sounding words, instead of saying: "the laying of water pipes will start next month," you may not be aware of the difference if you are called: "soldiers of civilization," "nation of progress," or "the pioneers for this or that -ism". But if you have a smattering of the new symbol writing, you will know that "civilisation", "progress", "pioneers of -ism" are meanings in minds only, whereas "water" and "pipes" and "laying" and "start to-morrow" has an exact and concrete meaning.

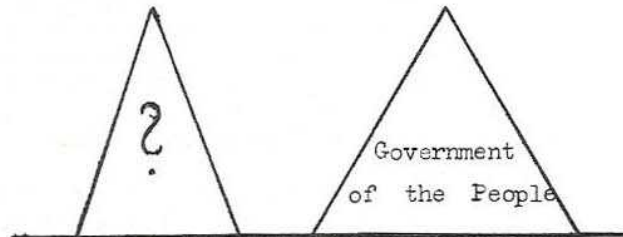
If people are told to classify the words according to real THINGS and real ACTIONS and meanings in heads, then they would do what Brown wants them to do: "to ask for the realities and the facts" in other words for the THINGS and the ACTIONS.

(406) So, even if chapters on Democracy, etc, in books on semantography (or any other symbol writing) would be omitted or not permitted in certain countries - the bright boys would get them. Being ^{students of} high schools or universities, they would grasp all what has been said in the preceding chapters. They would get a fair meaning of how the people could shape their destiny. They would be impressed with what has been done in the countries of the West.

With this I refer to the following chapters, where it is shown, what a citizen gets - real chemical THINGS which he can put on a scale; the meaning of Democracy directly translated into calories, housing space, hospitals, schools, parks and the good things of life. They may get respect ^{and} admire those countries, in which the citizens get so much.

Now, all this which has been said, should not make us complacent; we shouldn't think that all is well with us, and there is no need for improvement. On the contrary.

Students of the structure of a community, who have absorbed the teaching of the positional function as shown on page 495ff might be staggered, when they would discover that the community structure of their country look stangely similar with that of Soviet Russia (p. 491)



Let us assume a Democracy, in which the voters are conscientious citizens, in which the deputies and ministers are highly capable to work for the benefit of the whole people. They would make excellent laws, issue wisely thought-out directives, etc, etc, and still all might come to naught. There might be another pyramid parallel with the pyramid of Democracy. The oligarchy of that invisible pyramid would represent the real rulers of the country. It might be a party which would control the posts in the civil service. It might be a particular clergy, or the descendants of a small group, who conquered the country centuries ago, and still hold the land, or the schools or the press, or the mines.

There would be of course a very measurable difference between such a structure and the structure of a "one party democracy", which must rely on prisons and forced labour camps. Russian ^{leaders} do not deny the existence of concentration camps; they deny the high figure, quoted by Russia's enemies. But prison bars for opposition are hard, no matter how many people are put behind them.

In any case, the chemist will tell us, that in nature, nothing appears in purity. Every chemical is found with a lower or higher percentage of "impurities" or other compounds. A law, a structure for democratic election may be excellent, but if a high proportion of graft, stupidity or "vested interests" are mixed up with it...

If conscientious citizens follow what is going on in their country, if they are aware that they may lose to-morrow, what they have today; if they are constantly on the alert; and - if they are able to free themselves from the high-sounding speeches - their lot must improve. For me, there is not the slightest doubt, that the present leadership of the Western world in all walks of life, not only industry and commerce, but also literature, music and arts is a direct result of the awareness of their citizens throughout the last centuries. The peoples of Asia have an older culture, but they have slipped during the centuries, and let mandarins and maharajahs govern them.

But let us assume for a moment, that all is well in a community. No graft, no corruption, honest citizens from bottom to top. There is still something, which, like a bacillus, affects our thinking and our doing. In fact, we may term it a weakness of the human mind. We shall not invent a word indicating a vague mind re-action. We shall draw up a symbol containing THINGS only:

a man and a shelf



the shelper

The man who shelves - work to be done and ideas to be put into practice. You find him everywhere, in the civil service, as well as in the old established business firms, in the government, as well as in the university. They are nice, honest, sincere men, assuring you help and assistance, showing interest and understanding for your plea or project. But the moment you turn your back, they shelve it - for good.

They are going to shelve this idea of semantography. Only a miracle could help.

THE CITIZEN'S RIGHTS

"Now our problem then is to understand one another. And it is no easy problem, it will require infinite patience. Russia, for instance, sincerely thinks that the Western world has no real knowledge of freedom. That is precisely what the Western world thinks of Russia."

Hewlett Johnson, Dean of Canterbury (103)

"The trouble with the Yalta declaration is that the Soviet interpretation of such key phrases as democratic institutions and democratic elements is altogether different from that of Britain and the United States. Nowhere has this unpleasant fact been more in evidence than in Roumania."

Leigh White (104)

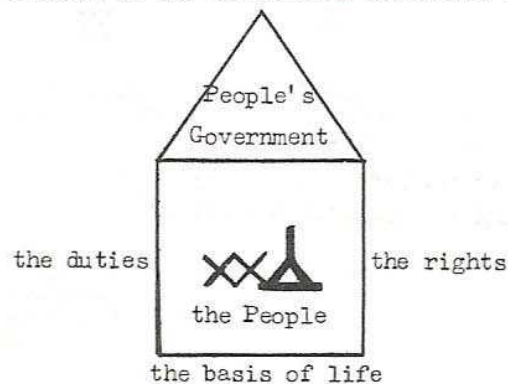
The purpose of these chapters is to show, that a chart could be compiled, which should be displayed and explained in school rooms and community centers. Today charts of the structure of the human body are hung in school rooms, and they give the children an idea how the different parts of the body work together. Children know, by personal painful experience that one part of the body could be affected by illness, and thus disturb the working of the whole body.

Charts showing the structure of a community, the rights and duties, etc. of the citizens, etc. etc. should fulfil a similar purpose. It should show the children that they must work as parts and cells of a greater structure, that they must discharge their duties towards this greater structure, but they must demand their rights, within the community, just as certain parts of the body must be given certain rights, ^{and freedoms} as otherwise their functions would be impaired. Bind an arm and hinder its movement, and it will go ill, and disturb the whole ^{body}.

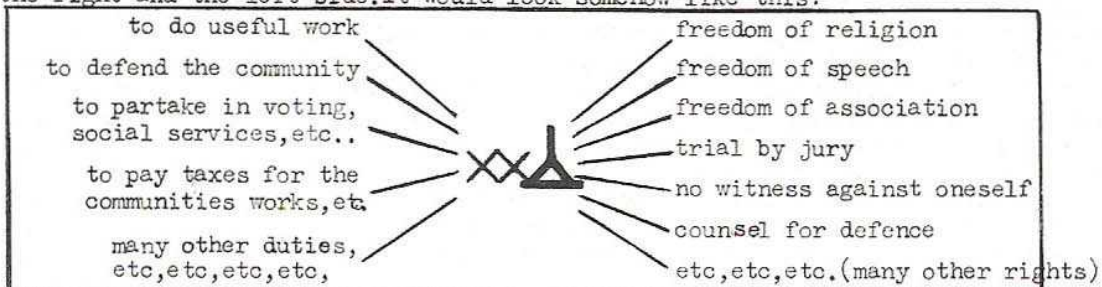
Now, you may call this a very bad analogy, but you may acknowledge that the human body is a wonderful community of cells, in which every cell has its special duty, but must be given certain rights ^{and freedoms} in order to be able to discharge its duties.

However, in regard to anatomy, we have already passed through the age of quacks and witch-doctors. In regard to the anatomy of the community we are still in this age of confusion. We use strange incantations and strange words of power, in our public speeches, the press, the books. We must start to analyse these words and see if we could refer them to physical ACTIONS of chemical THINGS. This is precisely what the doctors have done. Many millions of people, who would have otherwise died, have been restored to health and well being.

The outline of such a chart of the anatomical structure of the community would look somehow like this:



In the foregoing chapter, we have tried to outline the structure of the triangle on top: the government of the people. In this chapter we shall try to outline the structure of the right and the left side. It would look somehow like this:



THE MEANING OF "MUST", AND THE MEANING OF "RIGHT"

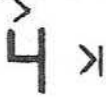



A chart drawn up in this way and hung in the classrooms would not be objected to by most governments, except some potentates in Asia and Africa. If we write the lines in the symbols of semantography it would be readable in any language and understood in every country.

Here, however, is the great difference between such a chart written in phonetic writing, or in our symbol writing. In phonetic writing, all these rights and duties look very clear, sensible, etc. We do not realize how vague in meaning they are, and we are very much astonished that people and governments of different "ideologies" interpret the very same words in a different way, nay, sometimes in the directly opposite way.

In semantography, however, we see at a glance, which words may be relative, and interpreted differently by different minds. Semantography, on the other hand, enables us to translate these meanings, relative and vague as they are, into meanings indicating directly THINGS we can weigh and ACTIONS we can measure. In some cases, however, this may be impossible.

We shall now take - as a model - the Bill of Rights as laid down in the Constitution of the United States. We shall take only some relevant sentences or part of a sentence, and we shall only indicate the relevant words in symbols.






Firstly, how should we symbolize the terms rights and duties. This latter word is easier to symbolize.

			
to be strong to (towards) to force by physical power (man with bent arm)	to force (someone by power of mind)	to be forced (by someone, etc. passive) a MUST, a DUTY	to be forced by conscience, super-ego a MUST, a DUTY

We see at a glance, the interrelation in the meaning of DUTY by CONSCIENCE. Someone within ourselves forces us, a higher mind, the teaching of our father, minister, the fathers of the Constitution, the prophets, Nature, God... whatever you prefer to say.

This interrelation within our mind: we force ourselves and are forced by ourselves, brings it about that DUTIES dictated by our conscience, are considered as RIGHTS by our reasoning. To defend our country is our "duty", but also our "right". To partake in the government of the community is our "duty", but also our "right".

However, we must devise another symbol for "rights", more appropriate to the meaning we understand by it, and wider in scope.

				
<u>to own, possess</u> priv. property	<u>to have</u> in a general but vague meaning	<u>to have</u> meaning in a mind	<u>to judge</u> by reason	good, right reason

We can define the meaning of "right" as a meaning in our mind, that "we have something which our mind judges as a good and rightful belonging".

	
R I G H T contemplated by <u>reason</u>	R I G H T contemplated by <u>conscience</u>

We must admit that these symbol compounds are very complicated, compared with the other symbols in this book. On the other hand, we must admit, that few words in the languages of the different nations are so complicated in meaning as the word R I G H T. At least we could say, that our symbol compound contains some definition. At the same time it shows a profusion in display of the mind symbol. We discern our mind, and our judgement, but it may well be that these judgements have been established by other minds. This is the case with the RIGHTS which have been established by the wise judgement of the fathers of the Constitution, and which are followed by the judges, which have to judge accordingly.

All this refers to RIGHTS contemplated by reason. If we come to the contemplation of the meaning of RIGHT by our conscience, then other minds are "speaking up" within us.

At the head of these chapters you will find the remark that they represent only a section of the chapters which I intend to write in the third book. No doubt, these problems about "democracy" and "democratic rights" may well fill a whole book. I must adhere therefore to a certain brevity. I shall print below sentences or part of them, from the Bill of Rights in the Constitution of the United States. I shall outline in some cases the full symbol, in other cases I shall only partially indicate the symbol by the outline of the mind symbol or by the indicator for human EVALUATION. This would mean that it can be evaluated differently by different minds.

These are wonderful words - the words of the fathers of the Constitution. However, they have been evaluated in many different ways. A generation, trained in semantics, would demand words, which are not vague in meaning.

Translation of some words from the Constitution of the United States.



Freedom of Speech

The meaning of Freedom in the widest sense is to think, feel, act, etc, to "your hearts desire". The word as it stands is too vague in meaning. If you try to say anything in the United States - whatever your heart wants to express openly - you may run into a prosecution for libel. But where is the borderline?



Freedom of the Press (anything printed on paper)

Again a very vague meaning, as editors under prosecution for libel or other offences (propagating the overthrow of government, etc, etc) know only too well. This refers also to the "printed word" on a celluloid strip. Hence "Any similarity.... is purely incidental."



free exercise of religion

To pray and to preach in places of worship means "exercise of religion". However many people may differ about the question whether some sermons, for instance, of Father Doughlin still fall under the heading: "Free exercise of religion". The vague meanings are free and religion. Is incitement against persons of other beliefs still religion?

"No soldier shall, in time of peace be quartered in any house, without the consent of the Owner, nor in time of war, but in a manner to be prescribed by law."

This is a sentence sample, in which the important meanings could be symbolized by reference to actual THINGS. Consent (permission) is symbolized by a mind, who "let through". He may let through to-day, but he may think differently to-morrow. If we would write "written consent" we would place the symbol of the written page in front. This piece of material paper, would be exactly that chemical THING, which would avoid arguments.

The reference to law (symbolized by the book of law) makes it necessary to peruse the paragraphs in question, whether they contain concrete meanings, or open to doubt.

"The right of the people to be secure in their person, houses, papers, and effects, against unreasonable searches and seizures,..... no Warrants shall issue, but upon probable cause, supported by Oath or affirmation...."

There are many THING words in these lines. The words which may cause different evalua-

"ALL MEN ARE CREATED EQUAL", BUT ARE THEY CREATED EQUAL?

tion by different minds are: unreasonable, probable cause. Oath or affirmation refers to the utterance and evaluation of other minds, which must be treated with caution.

"...nor be deprived of life, liberty, or property, without due process of law..."

The term liberty is too wide and vague in meaning. In this sentence it refers directly to "non-captivity". Please peruse kindly the explanation in chapter p.157 this edition.

The meaning of this line may be translated: no secret police, which can make you disappear over night, "without due process of law".

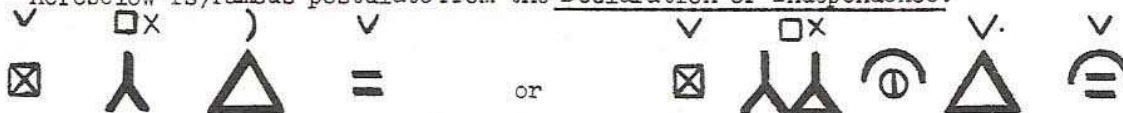
However, there is the term law. Although the symbol refers directly to a book, there is still the symbol of the mind, which judges. It may mean the mind of ^{the} law-maker, or the mind of the judge who interprets and judges what the law-maker has written down. We shall, in the course of this chapter, translate some relevant sentences from the Soviet Constitution, and see that they too may claim, the absence of a secret police. Whatever the NKVD does, it does it in "due process of law".

"...the accused shall enjoy the right to a speedy and public trial, by an impartial jury..."

The vague adjectives in this line are "speedy" and "impartial". A physicist could avoid the first adjective by stating: trial within 6 month of arrest. However, no physicist and no psychologist can remove the \checkmark symbol from the meaning of "impartial". If there is a meaning in our heads, which does not correspond to anything in nature, it is the meaning of "impartial". Our fathers fought for "Trial by Jury" in order to place a check on judges. Now, 12 laymen-citizens are made judges. They try to evaluate "impartially".

We see from these few examples, that we can proceed to terms which are more to the point, referring directly to specific THINGS and ACTIONS. On the other hand, some terms are bound up with reactions of our mind. We can never be sure how other minds will react. The best we can do, is again to specify THINGS and ACTIONS. Certain terms must be closer examined. Property refers to chemical THINGS, but "private property" refers to an abstraction which "civilized" minds have made. In certain communities (in past or present) this abstraction, evaluation, adjective is not enacted, or restricted to another vague "personal" property.

Here below is ^{the} famous postulate from the Declaration of Independence:



All men ^{have} _{been} created equal

All men are created equal

These wonderful words contain the reference to the Creator, and in our symbols we have the same meaning symbolized, (although some people may prefer the term Nature). Under the term men we understand, of course, men and women. They came and still come into life, by a marvellous and miraculous act of Creation. However, the word "created" is a past participle in "have been created", but an adjective in "are created". See the chapter pp. 243.

But the other two words "equal" and "all" do not specify a particular THING or ACTION. Consequently, they fall into the third group. They may be evaluated in their meaning differently. What we have to do, is to observe and measure.

We may then find, that these lofty words do not comply with the facts. We shall not say that they are "untrue". This word in itself is vague in meaning.

Now, if we measure the created men and women we find, that not two have the same measurements. In fact, there are not two human beings which are alike and equal.

On the other hand, if we compare them with other creatures, we shall find a certain equality: 2 eyes, 2 ears, 1 nose, 1 mouth, 2 arms, 2 hands with 5 fingers each, 2 legs, 2 feet with 5 toes each, 32 teeth, etc. etc.

But again not all created human beings show this equality. Quite a number of freaks with 6 fingers, 4 toes, etc. are born every day.

So we see that the words "all" and "equal" are vague in meaning, and must be replaced by other words, or specifically defined. If doctors tell us that "0.37 % of all births on earth are born freaks", we could tell them to cut out the all from their statement.

But if we accept their statement as correct, (which could only be said if restricted to a number ^{of} cases under their direct supervision), and write:

99.63 % men are created equal (in so far as they have equal number of eyes, ears, noses, etc.)

such a statement in the Declaration of Independence would just look ghastly (whatever ghastly means)

In this way, we have defined the second word Liberty to THINGS, ^{man within an enclosure,} ^{with reference} ~~Freedom to~~ definite actions, like speech, press, exercise of religion needs further definition and restriction in order to remove the vagueness of the meaning.

But Happiness will remain a vague feeling, a thought, a mind reaction. The best we can do is to picture the parts of the mind, in which the conscience dwells, the reason and the instincts and passions. It may seem almost impossible to picture this meaning with real THINGS. Happiness means all kind of things to people. To the educator and minister it means universities and churches. To others it may mean bathroom plumbing, air conditioning and frozen food, and to others it may mean quite different things and actions. There are the children many of whom will tear out wings from insects, and let them hop, throw stones and mud on other children, deface walls, tear up park railings, and in later years, when they grow up ^{they} ^{by} ^{some} small or big sadists at home, at school, in the office, at public meetings. They hurt with words, or they pump lead into flocks of geese, ^{this} ^{is} ^{the} ^{exact} in pursuit of happiness.

I read somewhere that two scientists have set out to find out the ^{exact} meanings of the words in the Declaration of Independence and ^{of} other historical documents, from the contemporary writings at that time. We know that the meaning of words changes incessantly. We know that Bible students study the words of the Bible, which have different meanings in different places, and they try to discover their meaning in the proper setting: what happened to whom at the time referred to? That THINGS, what ACTIONS?

When we do this in regard to the noble words of Jefferson, we find that they are the American equivalents of the French: "Egalite, Liberte, Fraternite" In 1776 these words were not vaguely understood (at least not Equality and Liberty) They referred to the heavy taxes, to the filth and squalor in which the ordinary people had to live, compared with the nobility, to the many innocent people who languished in the dark of the Bastille and other prisons. When the people had stopped these happenings, the words - being vague in their meaning - were used for anything else, for chopping off the heads of revolutionaries, for the rise of Napoleon, for bringing misery to many parts of Europe.

Now, many reader, especially in the United States, may resent these paragraphs. For them the words of Jefferson have a true, valid and sacred meaning. They are part of their creed.

On the other hand, we are amidst a war of words, a war of ideologies. Soon enough guns may start to roar, and bombs will come crashing down. And people will kill each other, without having the intention of ^{do} it, the small farmers, and workers, clerks and teachers in Soviet Russia, Poland, Czechoslovakia, as well as in France, Britain and the United States.

But up till now, it is still only a war of words, and we must understand these missiles. Just listen to a communist. "Ha, the United States. That a bunch of hypocrites. All men are created equal. Just look how they treat their negroes. But in Soviet Russia - ah, there!"

The communists don't realize, that they too are deceived by vague words to which different people attach different meanings. If we would only ^{induce} the peoples of this world to learn just a little bit of semantics, of the analysis of the meaning of words - why we may avert many clashes occurring today in many places. We may even avert a third world clash. We may have peace.

In my lectures, I translated various statements ^{into semantography} /submitted to me by the audience. They referred usually to what statesmen of different countries said in the papers. But I have found that the people with socialist leanings almost "foamed at the mouth" whenever I translated some saying of their Jeffersons, be it Lenin, Marx, Stalin, Molotov or Vishinki.

For them, who have turned their back to the churches, communism, and socialism constitute their religion. The sayings of their saints are sacrosanct.

Let us take one of the most relevant passages of the communist creed.

Translation from the Soviet Constitution

In Soviet Russia you can do anything, you can criticise to your hearts desire, provided however that it is

"in conformity with the interests of the toilers and in order to strengthen the socialist system. (105)

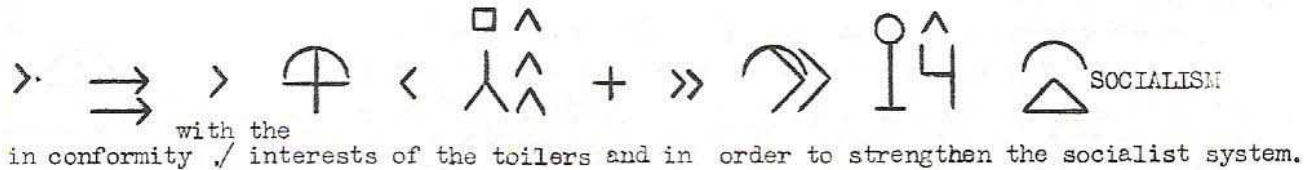
To a communist, to a socialist, to ^{some} students of politics, to ^{some} intellectuals, to the man in the street... why these words are "clear as the sun". They have a very definite meaning. It is impossible that anyone could misunderstand them. They represent truth. They represent a belief in the struggle of men to free themselves from the inequalities, which nature has bestowed on us. For this belief, people are ready to die or to kill others, who dare to oppose this. Whatever men do, it should be "in conformity with the interests of the toilers. "

Yet, when we take semantography, we find that only one word refers to real THINGS and ACTIONS: toilers - men who work - workers. The other words contain human EVALUATIONS only.

And human EVALUATION words are just evaluated differently in different minds, and for this, many good, honest, courageous socialists and communists had to face the firing squad.

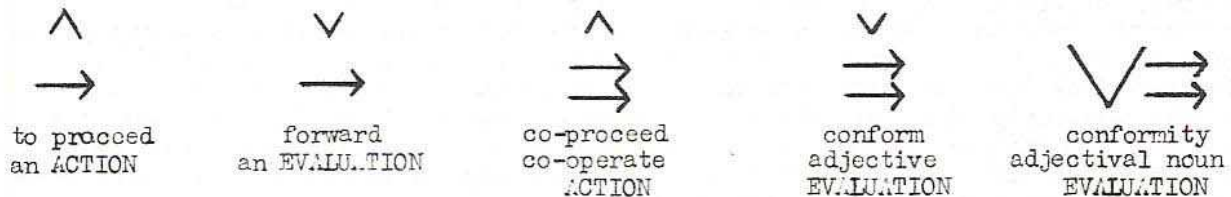
Let us translate this sentence into semantography. We have not yet evolved the symbol for socialism. It's a system, conceived by minds, a design, a plan. For this we have already a symbol (p. 534) We shall therefore write down "socialism" in phonetic writing and refer the reader to the coming chapter on this term.

In order can be translated for the purpose of. The word order is the synonym of system and we could even translate the words in order by "in the design, plan, system to strengthen the socialist system." But we shall use the symbol for purpose, as the simpler one.



These words are the official translation, made by the staff of the American-Russian Institute and published by them in "The Soviet Union To-day", New York 1947.

Now let us take one word after the other, without the particles (in, with, and, of, the) Conformity. Actually we should use the proper symbol for the adjectival noun. Conformity stems from the adjective conform. Then there are the synonyms.



The arrow points into a certain direction. As we write in this direction, we have agreed that this direction should be evaluated forward. But from the chapters on the Relativity of Space, we know, that forward standing alone has only a relative meaning. We must add the system of reference. Forward from what? - to what?

From a debate in the House of Commons about the nationalisation of the steel industry

Stafford Cripps:

"I consider this bill a step

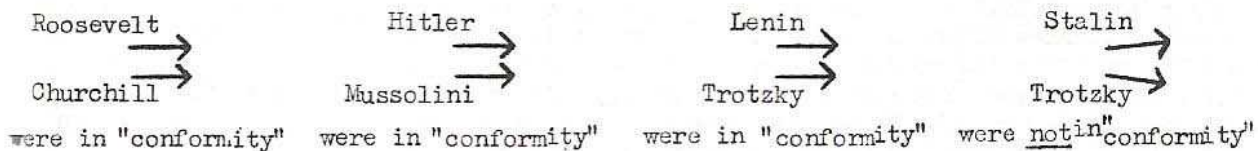


Winston Churchill:

"I consider this bill a step



Both ^{are} honourable gentlemen, both ^{are} acutely aware of the dangers to their country, both are devoted to the cause of their country and their people. But both ~~thinking~~ in different directions. When they state their sign post: (1) government control of industry, (2) decline of the efficiency of the steel industry, we know the particulars, which we have to discuss. But forward and backward have no meaning in themselves, without reference. We have not yet realized that most parties, the democrats, the nationalists and the socialists, call their party "progressive", moving "forward". If "forward" can mean the direct opposite, ^{ing is relative} then its meaning is relative. Conformity again (although referring to at least two actions) is relative in meaning.



And all of them were firmly convinced that they went "forward". Even Stalin, by himself and Trotzky by himself thought so. But these two men were not in conformity. Trotzky, a great socialist, the builder of the red army, and of Soviet Russia had to flee. After having committed the blunder of letting him past the frontiers, they chased him over the whole earth and at last administered the kill to the old man in Mexico. No conformity, that was all.

We may be sure that the killer, and the men who ordered the kill, and millions of people who heard about it, believed that it was "good" and "right", because it was

"in conformity with the interests of the toilers
and in order to strengthen the socialist system."

Now, conformity, being a word, relative in meaning, we must state the sign post, the system of reference. If two chemists say, that they are ^{in conformity} conform in regard to the ^{in grams} weight of a piece of metal, they have stated clearly their system of reference. Even so, they are aware that their conformity has its limits, about 0.0001 g. The first may find the weight 15.7689 g and the other 15.7688 g.

In the communist creed, the system of reference is stated:

"in conformity with the interests of the toilers"



So let us examine the meaning of interests. On p. 159 and 621 ^(this edition) is drawn up the symbol. It indicates that interests means a thinking of a PLUS, ^(whatever a mind considers a PLUS). The reader is asked to peruse the pages referred to. In any case, the meaning of interests may mean ^{different} many things and actions. If we would define interests in a particular case as follows: "in conformity with the interests of the toilers to get two loafs of bread daily", then we would know what we are talking about. But interests in itself, is too sweeping a term. When Lenin introduced the NEP, the New Economic Policy, in which he re-admitted "Capitalism" into Soviet Russia, he did this "in conformity with the interests of the toilers." When Stalin made a pact with Hitler, (and thus enabled him to attack the West first and then the East) this too was "in conformity with the interests of the toilers". Any communist will explain this to you, and he will be firmly convinced of ^{ing in} speaking the truth.

Now imagine yourself as a good communist worker in the Soviet Union. Your criticism may be permitted, if your foreman, factory manager, trade union official, local police officer thinks, that it is "in conformity with the interests of the toilers". But who is to decide about this conformity? You may criticise something in your honest belief that your criticism is "in the interest of the toilers" - but what about if your superiors think in a slightly different direction. No conformity - then anything may happen to you, in compliance with the written Constitution of the Soviet Union.

Now suppose, your foreman, or police officer is in doubt, whether or not he is in conformity with you, or whether or not your criticism is in conformity with the interests of the toilers. Then the Constitution gives him a second help. It says that your criticism must be permitted if it "strengthens the socialist system." These words are "clear as the sun" for any firm believer of the communist creed. But what means "strengthen"?

"Strengthen" is the verb form of the adjective "strong". The primary meaning for a human being is "being strong physically". This is the outline of our symbol. An individual standing upright, with his arm bent, as strong men do, to show their biceps. If you say: "I need a strong man.", people will firstly think, that you need a man, physically strong. You will have to explain to them, if you want a "strong man" in the government. Even then, people may mistake a "strong, ruthless tyrant, with a "strong" thinker.



What means then "to strengthen"? If you give a person good food, enough rest and proper exercise, in a gymnasium, no doubt, all this will "strengthen" him. If you add a second iron rod as ^{additional} support in a bridge, no doubt, this will "strengthen" this support and the bridge.

But what in particular do you think will "strengthen the socialist system?" The words do not give any hint as to any particular ACTION or THING. Anything may "strengthen", anything may "weaken" the socialist system. In regard to some real THING, say a human being, we know what measures will strengthen or weaken him. But if we use these words for anything else, we use it as a metaphor. We carry over the original meaning to something else. The trouble with metaphors is that we absorb them so quidly in our thinking, that we don't realise the transfer (Greek metaphors) ^{which} we have made in our minds. When we say "to strengthen the leg of a table", we don't realise that we are using two metaphors. A table has no legs. Only a human or an animal or an insect has legs. And a chair has no arms either.

The reader is asked to peruse the chapter on the metaphor p. 420 ff. The symbol depicts the line of an individual with the mouth on top. It indicates a "figure of speech", a highbrow saying, a metaphor. We may "strengthen" our belief, our conviction, our ideas about this and that. We may "strengthen" the idea of brotherly love, we may "strengthen" the idea of socialism, and we may "weaken" the idea of capitalism, but all the time we use a ^{vague in meaning} metaphor, that we "strengthen" are only ideas in our heads, and these ideas have different meanings in different heads. What you think would "strengthen" the idea of socialism, others would not think so. And if these others would come to the conclusion that, what you think would actually "weaken" the socialist system, then in due course a trial might be arranged, sentence pronounced ^{you, a} and a good socialist might die, in the conviction that



the meaning of "socialism" is different in different minds. We shall try to grapple with this meaning in a coming chapter.

This analysis of a relevant passage in the Soviet Constitution shows you that you may be convicted for anything in due process of law, if your judges come to the decision that what you said or did was

"not in conformity with the interests of the toilers, and was not in order to strengthen the socialist system".

People outside Russia believe, that there is a secret police in Soviet Russia, the NKVD formerly called G.P.U. But according to official statements (105)

"Formerly, the G.P.U. was an independent agency, not responsible to the Council of People's Commissars. Its functions are now assigned to the regular Ministry of Internal Affairs, and search and seizure are subject to court order."

So you see, if you are arrested and deported to the salt mines, it is done by a court order, and if you ask "why am I arrested?" the answer might be that your doings are not in conformity with the interests.... and off you go.

But don't think that such vague sentences are only used by the Soviets. You will find them in the utterances, made in any other country. Many people in the United States, from the intellectual to the member of the Ku Klux Klan believe that the doings of many persons are "not in conformity with the interests of the American people, and do not strengthen United States Democracy. Fortunately, this phrase is not incorporated in the Constitution.

(see p.167 this 2nd edition)

PROLETARIANS OF ALL COUNTRIES, WEIGH AND COMPARE!

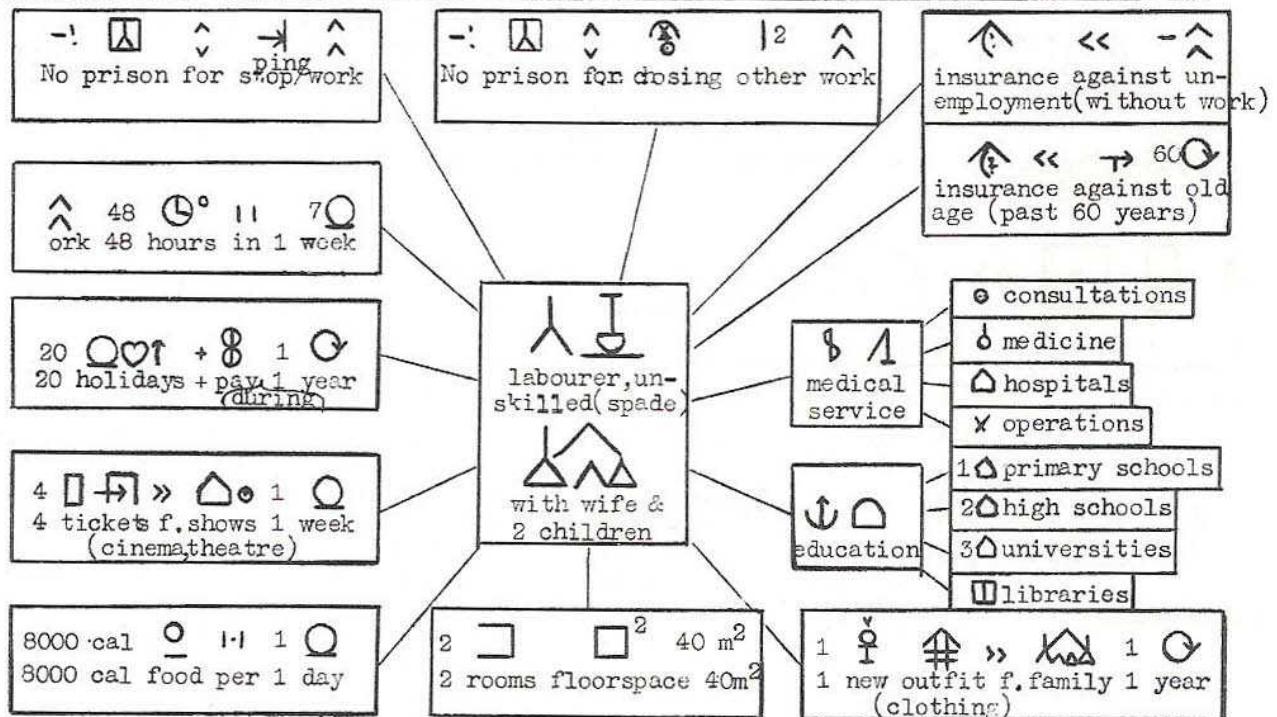
"The average voter in many lands suddenly discovered what a little common sense might long ago have told him; that a right of suffrage does not fill a stomach, build a house or create a job."

Ivor Brown (79)



Well, we know that that a Democracy is of little use, if it can't comply with the needs of the people. But "need" is a vague meaning. If we say, that a worker in a Democracy ought and should get proper compensation, decent wages, full value for their work, then the words "proper, and "decent" and "full" and "value" are EVALUATION words.

So we must again turn to the chemo-physicist to give us some yard-stick. We can then draw up a chart, like a formula, which would contain some minimums an unskilled labourer, with a wife and 2 children must have. Such a chart could then be used in any country. It may look somewhat like this

CHART SHOWING THE MINIMUM OF THINGS AND ACTIONS WHICH AN UNSKILLED LABOURER SHOULD GET



This chart should be augmented by details. I couldn't type more of such details on a page like this. Therefore we shall take the sentences one by one, and see how their structural formula could be augmented. It should be understood that all these paragraphs are only a rough outline of what could be done. An international congress, instead adopting resolutions, which contain vague words only, should draw up the minimum, which a married citizen, should be given in order to live. Such a chart distributed throughout the world, would then be a basis on which citizens could discuss, whether their government has provided this minimum or not.

8000 cal  |·| 1 
8000 cal food in 1 day





This must be considered ^{the minimum} for two hard working adults and 2 children. The amount should be balanced in proteins, fats and carbohydrates. There is not any strict rule, as to the division, but we could assume, that each group should not be represented in an amount, less than 20%; it could be stipulated that the percentage may

vary according to country and season. Such calculations should not present serious difficulties.


2   40 m²
2 rooms floorspace 40 m²

Two small rooms with a total floorspace of 40 m² should be considered a very low minimum. Yet, many families of workers or farm hands have to put up with much smaller space. Of course, the quality of the habitation is difficult to standardize, but two clean rooms

kept in repair, are not difficult to agree upon. Additional details may indicate, gas, water, and other amenities, as these should be included in the minimum. This all refers to the rental to be paid for such 2 rooms.





1   >>  1 
1 new clothing outfit for family each year.

It should be understood, that the calculation of the whole earnings, divided for the various purposes, should contain a sum, which should suffice to clothe the family, no matter whether ^{this sum} is used (or not) for this purpose. Prices for clothing in shops, where workers buy their outfits, should not be difficult to ascertain.

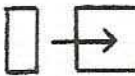


 48  1 
work 48 hours per 1 week.

Details could contain how much is to be paid for overtime, for shift work, etc. On the other hand, trade unions may fix the amount of work to be done, and bonuses to be paid for exceeding this. In Australia, there are very detailed awards in every trade, sanctioned by
















the government, and protected by court procedure.

20   1  + 
20 holidays per 1 year plus pay

In some countries, there are 14 days vacation guaranteed. Besides there are a few holidays, at Easter, Whitsuntide, Xmas, etc. which are paid. This figure: 20 holidays per year, represents a minimum. In some countries some holidays may be added. Workers who have worked more than 5 years in the same place, are entitled to a three weeks' vacation.

4  >>  1 
4 tickets for showplaces 1 week

Nowadays, there are cinemas in small villages even in Asia, China, India, etc. A weekly go to the cinema is enjoyed by the whole family, and ^{financially} is within easy reach in many countries. If the government in one country provides free shows, this should be considered as a contribution to the earnings and calculated as such.

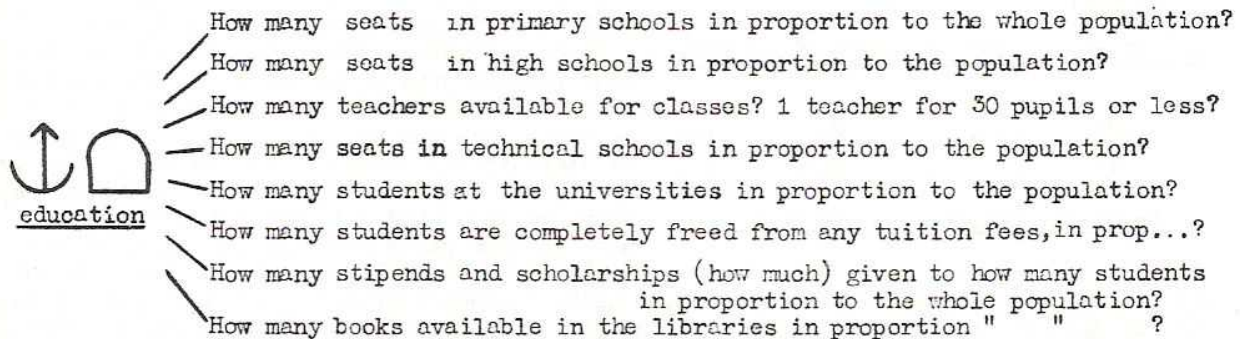
   >> 
1 Doctor for 2000 persons (of whole nation)
 -  
medicine without pay up to £ 10
 >>  >> 
10 hospital beds for 2000 persons
 >>    
free treatment, operation up to £ 100

To ascertain the free medical service available to the working population, a survey must be made of all hospitals, whether state owned, local or supported by private societies.

In some countries, workers and employers pay a weekly sum for this insurance. In some countries, the government provides these services. In Russia

the state is the employer. What must be counted, is the service available, the amount of

hospital beds, the number of doctors, who give free consultation, the amount of medicine, etc. etc. If we read somewhere that Australia, New Zealand, Soviet Russia give free medical service to the population, it sounds very nice, it sounds equally good in regard to all three countries. But what must be ascertained is: how much? How much is available and how much is given. If in Russia, the state as employer gives you a salary and the medical service "gratis" it amounts to the same as if the employer gave you a higher salary and you pay the amount for medical service as sickness insurance, etc. In Soviet Russia the Trade Unions operate the medical service. This is done in other countries too.



These are the questions we must ask, when we study the amount of free education which a country gives free to its population. If two countries have say 10 technical schools each, it says nothing. The question we must ask, is how many students can be accommodated and are taught in these schools. But even if both countries have both 10 technical schools in which 10,000 students are educated - this is not enough for our enquiry. If one country has a population of 5 million, and the other of 50 million, then the technical education in that bigger country is just one tenth only of that in the small country.

Let us take one example in regard to tuition fees. If we say education is free in Soviet Russia, it sounds wonderful. The statement as it stands, can mean only one thing: that no student in Soviet Russia has to pay a single kopek for his studies up to the universities. However, when we look into official statements, as for instance that made by the American-Russian Institute (105) we read about Tuition in the Soviet Union:

"Tuition is free for all up to the seventh grade of school for almost all in tekhnikums. In addition, most students in higher educational institutions received monthly stipends to help with living expenses (how much in percentage to the total of expenses?) There are nominal fees for institutes and for the last three years of secondary schools (how much is a nominal fee?) In these cases stipends may be granted to those with good grades. War invalids are given scholarship aid, regardless of their academic standing. Members of the families of servicemen, of pensioners, and members of large families are exempted from tuition fees, as are needy students generally."

(The words are underlined and the questions inserted by me)





This statement, can be made by some Capitalist countries, for instance United States, Great Britain, Australia, Canada, and many others, notably in Europe. There too tuition is free in the primary school and up to the secondary school. There too are nominal fees, there too are stipends and scholarships given to students with good grades. There too war invalids are given scholarship aids, etc. etc. and in those countries too "needy students are exempted from tuition fees generally." Even under the autocratic regime of the emperor of Austria, the above tuition helps were given; even under his regime and the regime of other kings and bourgeois presidents of European countries, tuition was "free for all up to the seventh grade of school". Even under the emperor of Russia, "tuition was free and stipends were given to needy students."

The question to ask is: how much in percentage to the whole population? This vital question is generally overlooked. Communists in "Capitalist" countries praise Russia, and don't realize that in their country too, education is free, just as in Soviet Russia. But how much do how many students receive in proportion to the whole population?

Insurance on passing 60 years of age

Certain European countries, which may be termed bourgeois and capitalist, have established old age insurance as far back as 1920. The insurance fee is either deducted from the weekly wages and paid in by the employer into the government insurance institution, or the government pays it from the taxes it receives from the wage earners (which amounts to the same thing). The question again is: How many ^{people} receive it (in proportion to the whole population) and how much is given?

—!   → 
 No prison for stopping work

—!    | 2 
 No prison for choosing other work

 << — 

Insurance against un-employment

way to a forced labour camp, almost certain never to come back and never to see his wife and children again. The other workers, seeing him disappear, will think twice, before they embark on a similar venture.

Conditions for workers are not good in most countries. In capitalist countries, the workers can stop work, go on strike, denounce the government, the management and anybody in any term they think fit, and can enforce their demands. The communist workers in those capitalist countries make the best use of this "freedom". However, as soon as the country turns communist, then strikes are forbidden, because now, they are not "in conformity with the interests of the toilers", and they "weaken the socialist system". For those, who still grumble, the forced labour camps are installed.

However, the communists have a strong case, in pointing out that the capitalist system cannot avoid un-employment, whereas in Soviet Russia un-employment is non-existent. It is of course very difficult to verify this claim, because, foreign observers - who want to go wherever they choose - are not admitted to Russia, and dissatisfied Russians are not permitted to leave Russia. But let us assume, that un-employment does not exist in Russia. How do they do it?

Suppose you have a certain trade, say, you are a saddler. One day you find yourself out of work. You will go to the labour exchanges, established in many countries. If you can't find work as a saddler, you may find other jobs. If you don't like them, nobody can force you to accept them. Then you may be informed that there is a job as a saddler, but in another town 300 miles away. Again - if you don't want to leave your town, family, relatives, friends, no force can be exerted on you. In due course, you may receive the dole, or call it the insurance money which the government pays you out of the money, which the government took from you as taxes. It may be very little - but it may be more than workers are paid for work in other countries. The only way is to compare, what your money can buy.

It may well be, that the dole is withdrawn, when you obstinately refuse to accept work in your home town. But in no case will a police van appear to whisk you off. This is just the difference between the countries, and it is a very important difference.

At the height of the depression, the percentage of jobless workers in various states was about 10% of the whole population. Germany with about 70 million had 7 millions out of jobs. The United States with 130 had about 13 million. Austria with 7 million people had about 700,000 workers out of jobs. The dole was paid, Roosevelt gave them some kind of work, but altogether it was misery. When Hitler came to power, he created the labour service. It was, of course, "forced". Young people had to go, but they were given uniforms and music and were told to bear their spade as a sign of honour.

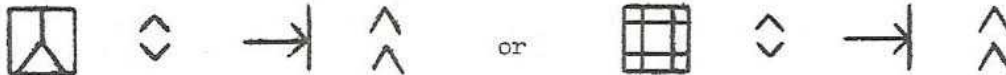
In Soviet Russia, there are the vast spaces of Siberia, where conditions are very grim. People didn't like to go there. The planners wanted work to be done there. In capitalist countries, the planners have to offer great incentives, amenities, pay, etc. to bring people to work in the wilderness. In Russia, the good things of life are scarce, even in the great cities, where you have to form queues to get them. In the wilderness of Siberia it is much worse - so the government had to make people go there. And if they didn't agree, they were forced. The rulers of Russia don't deny that they have forced labour camps. Escapees estimate that about 14 million Soviet citizens are thus held in servitude. This would mean about as much as were out of work in the worst time of the depression. In this way any un-employment can be wiped out. But even if we estimate that only 1 million of

These three groups shall be discussed together, because they are related to each other. For people in some countries, who have been subjected to the whim of their rulers for centuries, these groups have not much meaning. Only a man, who has experienced "personal freedom" (which means, that he was not obstructed from going anywhere) knows, that the "freedom to stop work and choose another work" is just as important as to breathe, to think or to eat.

A country, where this "freedom" is impeded must rely on prison and police to enforce the rule, that an individual has to work where his planners want him to work. If he objects, if he is dissatisfied with conditions, if he says so openly and thus arouses the wrath of superiors, they may soon find out that his actions are not "in conformity with the interests of the toilers" and he will soon find himself on the

Soviet citizen are in forced labour camps, because their attitude was not "in conformity with the interests of the toilers" and did "weaken the socialist system", this very fact alone, keeps the other workers silent and obedient. They go wherever their government wants them to go, and they bear their fate with the old melancholy, which we know from the books of the great Russian writers.

It is good to know that you will always have work. But it is bad to know, that one day you may be sent away thousands of miles and you can't do anything but obey. In the so-called capitalist countries, the workers of a factory can walk off the job, and the government can do little more than negotiate with them to come back. If the workers in the Soviet Union can strike, can refuse work, can choose their work, can leave the town, or the country to seek employment elsewhere - well and good - but if they can't do this, then they must insert in their formula the group



Imprisonment for stopping work

Prison bars for stopping work.

These symbol groups show you hard facts, enclosures and prison windows with iron bars (or you can see in them, the crossed barbed wires of the concentration camps). If you put this group in the formula on page 505 you will find that it fits in. There too chemical THINGS are depicted, food, housing, clothing, tickets for show places, money for vacation, etc. etc. Prison window bars, camps enclosures are chemical THINGS too, hard facts.

Socialist readers will be very angry with me, but I am sick and tired of debating with words only. Almost every week, for the last 30 years I had to listen to words, or I am forced to partake in controversies. I am a worker too. As an engineer in a factory, I worked just as hard as the others, covered with oil and dirt, and exhausted at the end of the day. In 1917 when the Russian revolution occurred, I was a soldier and sick of the war. Great hopes sprung up in my mind, and since then I have closely followed the happenings in Soviet Russia. I read official and unofficial books, I spoke with engineer colleagues who were there. I travelled extensively, and I wanted many times to go to Russia, to see for myself. However, I was informed, that the sightseeing tour will be on prescribed routes. I shall not be allowed to go wherever I want to go. Then I preferred to look at the official pictures of streets, houses, and factories. It saved me time and money. But as an engineer I looked always for the hard THINGS, not for the high-sounding words. What did the Russians do, which other countries, in the "clutches of capitalism" did not do? I compared the Russian official figures (taking them at their face value) with figures of other countries. I looked at the pictures of the dams and factories in Russia and looked at the pictures of Boulder dam, of Grand Coulee dam, built in "the clutches of Wall Street", and at the pictures of dams in other countries. They looked an achievement, without being termed a capitalist achievement, or a democratic achievement. When an underground railway was built in Moscow, stamps were issued, and the feat celebrated as a victory of communism. Yet that strip of underground rail is only a fraction and a small one in percent (I shall quote the figure later on) of the underground in Paris, London, or Berlin, not to compare it with New York's achievement. Yet these countries made no fuss about it. Even in Germany, the Weimar government great engineering feats were performed, without anybody bothering about it. But when Hitler ordered some highways to be built - ah, that was a national-socialist achievement. I travelled to exhibitions, and studied closely the pavilions of Soviet Russia. I remember the exhibition, I think it was in Brussels. A impressive big hall, the walls covered with figures and pictures. But I was not interested in figures. I could not ascertain if they were correct or not. I looked for the real THINGS, which I an engineer could judge. And there was one. At the end of the hall, there was a THING, a Russian motor car. Apparently the Russians thought this such a great achievement, that they let it stand alone in the vast hall.

But it couldn't impress me. I just remembered for instance Austria, a small country with only 7 million people, the government and civil service as we are told "in the clutches of Roman-Catholic clergy". Yet this little nobody country produced two excellent cars, the Austro-Daimler, the Steyr, not to mention others (Graeff & Stift, etc, etc)

As an engineer of a factory for electric lamps, I had some times to deal with the quotas which the international trust of lamp factories ascertained for each country. The quotas were always rising in all countries. When the communists produce figures, that - in Tsarist Russia (1914) let us say, 10,000 lamps were installed in street lighting in Moscow, and now in 1946 there are 50,000 lamps, the difference of 40,000 lamps cannot be

accredited to "communist achievement". It can easily be proved that the figures were rising everywhere. Street lighting rose in Calcutta, under the clutches of British colonial rule, as well as in Cairo, Valparaiso, not to speak of the towns in countries like France, Sweden, Canada and the United States, "wholly capitalist".

Why do I write all this? Why do I jeopardize the sympathy of so many readers? I am as much interested in the "progress of the human race" as any communist. And if the communists have achieved greater deeds than the non-communists, than they should get the laurels, and the whole world should turn communist. But to judge their achievements, we must, for heavens sake, turn away from words. We must start to see the real THINGS behind the words, and we must start to put them on a scale and weigh and compare them. Then we would find, that non-communist countries have achieved a much higher standard of living for their workers than communist countries. I am not speaking of the feudal effendis, paschahs and maharajahs which let their people go naked. The communists' wrath is mainly turned on the so-called "democratic" countries. There the people may compare and weigh the good things which they have. These people are drugged by the communists with grand words "American Imperialism", "Capitalist menace", etc. I have no excuse for the greed, and crimes committed in "democratic countries". Those politicians, exposed in America, and other capitalist states, do just the same what some communists do, and what Hitler did. They use words, grand words to muffle their designs.

There is only one way open. The way of the chemo-physicist, who weighs and compares. For this reason, I have drawn up a chart of the minimum of what a labourer has to expect from the men who rule the state. This chart, outlined on page 505, could be displayed in any country, for better and for worse. Let the people start to weigh and measure, and let them chase away their rulers, if they can't provide this minimum. As an engineer I know that it is possible in any country, if engineers replace the pashas. Let this chart be displayed and distributed in all countries. Let it go under the heading

Proletarians in all countries, unite to weigh and compare!

Let the people start to observe, and weigh the chemical THINGS and physical ACTIONS. Let them realize that words are words only, sounds which shake the air, and that the ones most used by politicians, are those which have a very vague meaning.

If we don't do this, we are heading for war, as sure as the to-morrow will come. And it will be a terrible war. We will fight not only the people on the other side. Within our ranks the fight will start, until we destroy the very things, which enable us to live. Russia and the Western world can live in perfect peace and exchange their products. If we would only get away from the words, which confuse us.

Let us pay tribute to the achievements of the Russian people, let us examine what they did, let us compare with what we have done, let us understand their difficulties and let us understand our difficulties. Let us adopt the view point of the engineer, the scientist. Let us weigh and measure.

Whenever I ask some people with communist leanings, why Soviet Russia with all the riches of the earth within her boundaries, has not yet been able to provide the people with the meanest things of life, for which they must still form queues, now more than 30 years after the revolution - they answer invariably with a metaphor. They tell me that I must compare Russia with a man, who went through a grave illness and now, it takes much time to recover. When I refer, however, to countries which have lost the war, e.g. Austria, Germany and others, and have made a recovery within a few years - and today are already competing on the world markets with products of a high standard - then my friends get very angry. Some of them start to quote figures - and here we come to an important question: If we should weigh and compare achievements in different countries, we must have correct figures.

The answer to this is: every country should issue a year book of statistics. Some countries do this already. It would be a heavy volume, no doubt, but it will contain detailed figures. Take for instance the item on education. A few pages in the year book would contain long columns. Every town, village and hamlet would be named. In the various columns you would find the amount of school benches available in the school of that village, or that municipality; the amount of children, the amount of teachers in each school, the percentage of children per teacher, of children per population, of free tuition per total of pupils, etc. etc. Then a village dweller in Russia or in the United States could look up the figures for his villages in regard to school benches, teachers, hospital beds, doctors, and ambulances, etc. etc. and could find out for himself, whether the compilation is true or not. If it is not true, he should be allowed to raise hell, because this would be

"in conformity with the interests of the toilers".

In every village there should be a committee of citizens, which should control the statistical figures, not only in regard to education and medical service, but also in the power output of the municipal plant, in the amount of street lighting provided, etc. These statistical year books would appear every year, and would give the citizen of every village an indication whether conditions have improved. And he should not be whisked off to prison, when he says in the market place, that the official figures are lies.

Apart from this, the statistical year books of every country should be allowed into every other country. There should be an international exchange organisation, which should also fix standards and units of measurements. We have this today for Olympic games. Why shouldn't we have an Olympic world wide stadium, where we can show what we have done in every country in regard to education, medical service, amenities of life, etc, etc. Why should not the laurels be given every year to that country which have been first in such races?

The question of the different languages of such statistical year books can be easily overcome. Semantography is the answer. The symbols for the column headings are simple. They can be read in every language.

To the readers who resent this and the preceding chapters, who may say, that I should keep to semantography and not meddle in politics - here is my answer:

Semantography may be the tool to enable the different peoples of this earth, to compare their achievements and to measure their progress. It can be the very tool for a world-wide Olympic contest, in which the peoples of different countries could rival with each other, and win the laurels for providing the things, which make life worth living. For such a world-wide contest - the language barrier has to be overcome.

If the peoples of the Soviet Union will get the laurels in this or that field - honours should be given, where honours are due - but, the people in Russia must be allowed to go to other countries, and see for themselves. Anyone who wants to go, and has saved the money for the fares, should be allowed to go, the statistical year book of that particular country in hand, to see for himself and compare for himself. And he should be allowed on his return to tell, what he has seen.

And likewise, observers should be allowed to go into the communist countries to see^{and} weigh, and compare the statistical year book of their country, with that of a communist country.

Open the frontiers. Let anyone come in and see for himself. Let anyone go out and see for himself. And - abolish the forced labour camps. Today, a Soviet citizen is mortally afraid to speak freely with one of the few foreigners admitted. Stop this fear, give him back the right to oppose the rulers, to criticise their doings, to choose others. If the other countries can do it, and give their citizens the good things of life, Russia could do it too.

S O C I A L I S M

"Socialism is the name given both to a widespread body of doctrines and to a world-wide movement taking many different forms. It has a long history behind it; and the word has been used in shifting senses as the ideas behind it have developed and the situations facing it changed. A short and comprehensive definition is therefore impossible. We can only say that socialism is essentially a doctrine and a movement aiming at the collective organisation of the community in the interest of the masses of the people by means of common ownership and collective control of the means of production and exchange."

Encyclopædia Britannica 14th edition (25)

"The terms socialism, communism, collectivism, which have often been used interchangeably, are ambiguous and ill-defined; for this reason they have an exceedingly wide range of connotations. Proudhon, who passionately combatted communism as understood in his time, was later classed by Heinrich Dietz as a communist."

Oscar Jászi, in Encyclopedia of the Social Sciences, The MacMillan Co. New York

"There will be no administrative suppression or distortion of any subject that merits a place in this university's curricula. The facts of communism, for instance, shall be taught here - its ideological development, its political methods, its economic effects, its probable course in the future. The truth about communism is, today, an indispensable requirement if the true values of our democratic system are to be properly assessed."

D. I. Eisenhower in his Inaugural Address at Columbia University

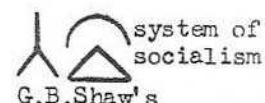
"Socialism" is one of the most controversial words in our times. Needless to say that it is not the name of a particular chemical THING or a physical ACTION of which we can form a mental picture. If it would be such a name, we would not fight about it. Instead it represents a meaning which is differently interpreted in different minds, and not two of them have exactly the same interpretation.

"Socialism" is the term for a design, a plan, a system, an order about the working-together of human beings in a community. We have already formed the symbol for plan, design in connection with the design of an engineer. "I have a design for a harvester", says an engineer, and when we ask him to tell us about, he would unfold his blueprints and would show a complicated drawing of a working-together of many machine parts. There might be other specialists in regard to harvesters, and they might have different designs and plans. We might give them a name, and call them "harvesterists", just as we call some people "socialists". Of course, the name "socialist" or "harvesterist" tells you very little. You may only know that the man is occupied with "societies" or with "harvesters"

Just as there have been great "harvesterists", inventors of harvester designs, so there have been great "socialists", and each of them had its own design.



a planner
a designer
a systematist
(s.p. 334)



But these symbols would indicate that there is something definite about the system of socialism of Karl Marx, or Lenin or Shaw. Instead we would find, if we study their plans, that they have changed their system during their life time, just as an engineer-designer of harvesters would change his system and draw up different designs during his life time. The difference is only, that the engineer puts his ideas down in a geometrical writing, with no vagueness, whereas the writing of the great socialists use words, and we know now, how much vagueness they contain.

I would draw the analogy further. The engineer would build his design and see if it works. Then he would improve it, according to his practical experience. Similarly the practical socialists, who tried to put Marx's ideas in operation, found that some of them, for instance, his theory of value couldn't be put into practice. So they had to invent something else/ which would work in a socialist community. Marx predicted that concentration of capital would cause complete poverty of the working classes, yet the greatest concentration of capital in the United States went hand in hand with the highest standard of living of the working class, and the middle class, which according to Marx, should have disappeared in the process. Militant socialists proclaim that only a dictatorship of the masses could save them. Other socialists are of the opinion, that militant fascism and nazism would never have been created, had not the socialists in Russia been so aggressive in working for the overthrowing of governments in other countries.

All this tends to show, that it seems to be utter folly to use the term "socialism" in debates. So much is cramped in this term, and so much of this cramping is differently interpreted by different people, that controversies can only lead nowhere. Again we would have to follow our procedure in recent chapters and try to draw up a formula with a lot of details to show what Karl Marx meant, and what Lenin meant, and what G.B. Shaw and the other socialists meant. It would be "a hell of a job". As soon as we would have drawn up a formula for socialism, after having finished one book of Marx, we would have to put in alterations, for the other book, or we would find contradictions to the first book.

What do people know about the meaning of "socialism"? If you try to find out, you will get the shock of your life. And if you would try to draw up the formula of what Mr. Smith, Mr. Jones, and Mr. Hardy thinks of the meaning of "socialism" you would stop using the word "socialism", because it has a hundred thousand meanings.

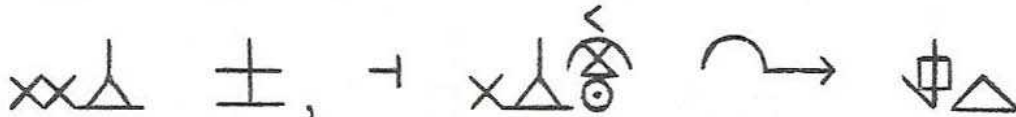
But semantography should be capable of drawing up a symbol for it. Not a "literal translation" like "society-system" which wouldn't tell anything. It would be a complicated formula, to be sure, but again, it would be something which we could put on a chart and hung in the class room to teach the children what is meant by "socialism".

Now, one of the postulates of the many socialisms is "community ownership". This we can depict. But the word "ownership" in itself is a human EVALUATION, which needs further interpretation. If we say Mr. Smith owns a machine, we have a fair idea about it. He can do whatever he wants to do with his property. When we say Mr. Smith owns a horse, we know that he can't torture and maltreat it. The community, and sometimes the horse too, would revolt. and we know that his wife is not his, and his children are not his, in the same sense as some things are his. "Ownership" alone is not enough. We must state "owns what, where, when?"

Now we find in various systems of socialism the formula: State ownership of the means and instruments of production. Instead of "means and instruments" we could use the meaning of "tool", which in semantography covers anything which humans use and can use. The meaning of "state ownership" has been already analysed in the foregoing paragraphs. We can thus translate the above sentence as follows:

Nation owns, but group of selectees controls, the tools of production.

This formula can be easily translated into semantography.



Nation owns , but group of selectees control tools of production
deputees govern

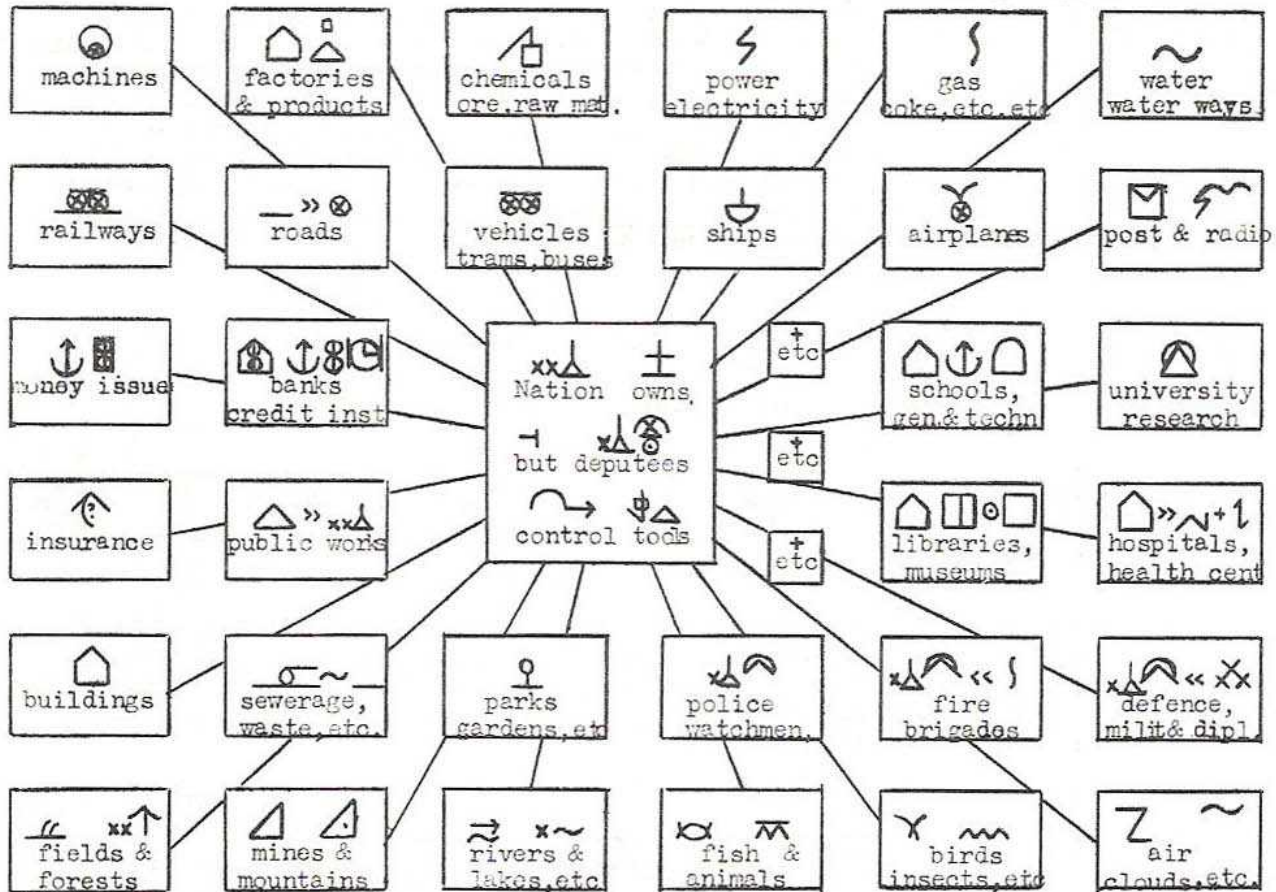
This formula contains two mind symbols. We have already recognized the mind as the great variable. Not only two different minds vary in their ACTION "minding". The very same mind of one individual may think today differently as he thought yesterday. Wherever we see this symbol we must be aware of its implications.

The first mind symbol in s-electees refers to the mind of the selector, who did the selection of the deputies at the last election. This refers to you and me and to all the other citizens who took part in the election. We are responsible for them being elected.

The second mind symbol refers however to the controllers, the governors, who control the tools of production. We could have put a third mind symbol over the symbol for tool, because different minds may vary about what is a tool of production, but you will soon see, that can take the meaning of "tool" in its widest sense.

We can now draw up a structural formula, to be inserted in our greater formula for socialism.

Outline of the centre group in a formula for the meaning of "Socialism"



Are the air and the clouds also "means and instruments of production? Yes they are.

No one would deny that fish are "means" (raw material) for the important fish industry. Animals (cattle, sheep, horses, etc) too are means and instruments of production. Insects, apart from bees, are today bred, imported and exported in various countries, as the savor of crops, and orchards. They kill off other obnoxious insects. So do birds, apart from the millions of chickens, ducks, geese, etc, which are the means of a very great industry in any country. But the air and the clouds?

Well, the air enters chemically or physically as a very important agent in most chemical manufacturing processes. Besides, the nitrogen of the air is today the most important source for ammonia and nitrates, which form the basis for fertilizers. The oxygen is used for welding and in hospitals. The argon, neon, helium and crypton are used for incandescent/ and fluorescent tubes. Besides, the air is today, just as the water, the carrying medium of transport. But the clouds?

Well, a year ago the scientists in the General Electric Co. of America, made rain by dropping ^{dry} ice pellets (CO₂) or chips of ordinary ice into suitable clouds, and produced rain. Others have followed, and the method is constantly improved. But - from whom are you taking away that cloud which passes over you? Important legal questions already arise between neighbouring states. Agreement must be reached, and in these discussions the meteorologists will be the important experts. If no agreement can be reached between neighbouring states, for instance in Europe, the nation deprived of its rain, may stage a war for utter survival. You have to live in Australia to realize that rain is an important ^{modality} commodity.

The air and the clouds belong to the whole nation. Contamination of the air by destructive exhaust gases is prohibited by the deputies, the government, in the interest of the people.

These paragraphs have been written to emphasize the fact, that almost anything is within the meaning "means and instruments of production" and the people elects deputies to control ^{almost} anything, including the "good and productive" microbes of the soil and the fungi, (e.g. penicillin), as well as the "bad and destructive" microbes, including the virus, which is supposed to cause the common cold. This "cold" accounts for ^(absentees) losses over 10% in all industries.

So, the structural formula on the foregoing page, represents the meaning of "Socialism", insofar, as it shows, that the whole territory of a nation, with anything on the earth, below it and above it, constitutes the property of the whole nation. It belongs to all the people. In order that all this should be properly managed in the interests of the whole people, the people elect their deputies, which control all this. This is clearly indicated in the formula in the centre - the main postulate in the system of socialism.

The variables are of course the minds of the electors and the minds of the governors. As the governors come into existence through the election, it should be clear, that the people ^{when electing} should be free from any coercion and fear of prison bars, or barbed wires. In other words: Democracy in election. But to explain this, we have to go back to the complicated formula for Democracy on page 477 ff. We have to look especially for the group formula of "opposition parties" and "voiced opposition" and see if they are bound up with the prison bar elements or not.

Now let us suppose that this structural formula for "Socialism" is printed on a huge chart and hung in the class rooms. At the head of this chapter you have found the words of the president of Columbia university, D. I. Eisenhower (the leading general of world war II.) He announced that communism will be studied at Columbia university. This means that the ideas, connected with socialism in general and communism, in particular will be studied.

Studying this vast assembly of ideas, means analysing one by one, and this can only be done by drawing up - either in your mind or on paper - structural formulae of how a community lives, work and interacts. If you draw it up on paper, just as an architect, an engineer or a chemist does, your ideas would become clearer in outline. Well, I have tried to draw up ^{the centre group of} such a formula and I propose that such formulae should be used in schools to teach the boys and girls the meaning of democracy and socialism. They are already taught today the meaning of benzene, nitroglycerine and other matters to be handled with the greatest care. And they are taught these meanings (which are somewhat complicated) by means of structural formulae.

Looking at such a formula, the boys and girls would easily grasp the meaning of "wealth of a nation" or "all this belongs to all of us". They would also grasp, that the nation must elect and appoint certain men and women to govern all this wealth. Looking at the semantography symbols, they would understand that we can use all kinds of synonyms for the symbols, as for instance shown on the next page.



many, many humans on earth (territory), large group of males and females, natives, settlers, aborigines, inhabitants, country people, residents, dwellers, denizens, citizens, autochthons, indigenes, forming a clan, tribe, horde, folk, people, population, populace, public, general public, common people, community, commonalty, masses, plebs, rank and file, etc, society, nation, etc, etc,



group of humans on earth, (territory) who do the ruling, controlling, governing, leading, directing, commanding, conducting, reigning, managing; the rulers, controllers, governors, leaders, chiefs and directors, sovereigns emperor, king, duke, president, fuhrens, general secretaries, chieftains, and their ministers, secretaries of state, people's commissars, senators, magistrates, deputies, officials, managers, masters, people in authority, leaders, bosses, big shots, etc, etc,

Now, the children have been taught to read a chemical formula. They know that H_2O denotes something, which has the term water. However the term slosh carries a human EVALUATION, it means bad water, and if we want to translate this EVALUATION, we would have to state as chemists, what this water contains, apart from H_2O .

Similarly the semantography formulae above, do not carry an EVALUATION as to good or bad.

But if we say: "Mr. X is a bureaucrat," we have added that EVALUATION. Now we mean: "Mr. X is a bad official." To remove the "bad" we have to examine his ACTIONS.

So the children could be educated to understand that "secretary of state" means not a "good official" and "people's commissar" means ^{not} a "bad official", and vice versa. It means solely a "citizen, who does some governing (for the people)". From the formula for "Socialism" the children would see, that the people must elect him to do this. From the formula for "elections by the people" they would learn how the people do the election.

So far as to the centre formula for "Socialism", which we have expressed in ordinary language:

Society (nation) owns, but deputies control the tools (means and instruments) of production

And now we proceed to the outer ^{of our formula on p. 514.} groups, which indicate the various means and instruments of production. And here we see symbols indicating chemical THINGS and physical ACTIONS, of which we can form a clear picture. All this we can put on scales, weigh and measure. Here we see machines, and factories, products, and chemicals, electric power, gas, coke, water, railways, ships, etc, etc. Sure enough, we see also a few mind symbols in the groups indicating education, research, police, defense. These are important groups as means and instruments in the process of national production, and sure enough they are the points of great controversy. They must be examined in detail.

Before we go forward in our examination, the reader should examine every group and ask himself or herself whether he or she is convinced that the groups indicated in the formula are to be considered "means and instruments" of production. What is not expressed in the formula, because of brevity, is that all these means and instruments are handled by the humans which constitute the nation, and they themselves are means and instruments of production. They need food and housing and the goods produced, but they need also the health centres to be fit for production. They must be protected against microbes, against fire, against criminals, and against foreign invasion. All the means and instruments to do all this, are owned by the nation and governed by its deputies.

Having now got a structural picture of the meaning of "Socialism", we may now proceed to examine the various societies on this earth. We want to find out, in which societies we find Socialism. But - just as in chemistry - we may find societies with no or traces of Socialism, other societies with a percentage of Socialism and societies with 100% of Socialism.

Looking over the societies on this earth we would make strange discoveries. We would find some societies in Africa, or elsewhere, where the potentate is the only owner of the means and instruments of production, which include the men and women, and children

which he sells as slaves, (yes, sir, this is going on right now when you read these lines), No doubt, the percentage of Socialism in such societies ^{may} be 0%.

Then we may find strange, but small societies, in which there is 100% Socialism. Nothing belongs to the individual, everything belongs to the whole tribe, including the women and children. Just think for a moment, and you would agree that males and females are means and instrument of production, not only that they plough and harvest, but in regard to their production of children. In fact, the birthrate and the upbringing of children is one of the most important problems of a society. In Soviet Russia, where ^(20 years ago) divorces and abortions were a formality of a few hours ("how progressive", many people thought) the leaders have recognized their errors, and now, divorce there is more difficult, than in many other countries, and deliberate abortion is prohibited. Well, Soviet Russia, how about it? There, we believe, is Socialism 100%.

And now our chart will come in handy. The boys and girls will study the official reports of different countries, augmented by reports of observers, and will try to determine the amount of Socialism in percentage, as far as this is possible. Naturally, we can only give figures, where we we can count. But, nevertheless, the study will be worthwhile.

According to official Soviet information, private property exist in Soviet Russia, You can buy many things in the shops, operated by the government, and they are yours, and only yours and nobody else's property. You may even own a house, a garden and an orchard. And you may even own means and instruments of production. You may buy a hammer and a saw, you may buy a cow and a chicken, you may own a sewing machine (if you can get one). And with these means and instruments of production, you can set out to "profit" by and "exploit" other citizens - within limits, of course. You may repair the neighbours table, and get some eggs in return, and you may sell the eggs on the "free market" or call it "black market" at incredibly atrocious prices, twenty times higher (and more) than the official price in the official shops. But there are official stores too, in which such atrocious prices are charged. If a citizen has delivered his official quota of foodstuff, etc. he may sell the surplus for any price he can exert - the prices are regulated by the only "law" supply and demand - just as in the so-called capitalist countries. Of course, all this is permitted within limits. We can set out to ascertain these limits, which would be difficult, if we are not allowed inside Russia. Or we can ourselves satisfy for the moment with the finding, that in Soviet Russia, there is no 100 % Socialism. We can't say whether there is say 90% or 80% or only 70%.

Now, we people of this earth, who read the papers and the books, who listen to the radio and the men who know, we are almost daily indoctrined with the belief that Socialism and Capitalism are the two great antagonist, the one is the opposite of the other, and there seems to be no reconciliation possible.

Well, we all know how serious all this is. If we don't change our mode of thinking we will soon have an all out war of the Capitalist countries against the Socialist countries, and vice versa, with no quarters given.

In spite of all the ridicule, which many people are going to pour out upon me, I maintain that the chemical formulae and the reasoning of the chemist may help us to change our mode of thinking, and to bring this very conciliation about, without which we will go to pieces, may be in a few years hence.

When we realize what Socialism means: Nation ownership of the means and instruments of production, we can draw up a huge chart with as many means and instruments of production we can think of, and then we can check up, how much of it is ^{collectively} owned by the nations in the different countries. Then we may get some surprises.

We may find that in a great many of the so-called capitalist countries, a great many of the means and instruments of production are totally or partially owned collectively by the whole nation. This refers to state ownership, or local town and village ownership. We would find that in many "capitalist" countries, the nation as a whole, owns collectively the railways and the roads, the power works, and the irrigation dams, the water ways, and the water works, the thousands of buses, trams and other vehicles of public transports, the local gas works with all their chemical factories, the postal service, and the public works, the money issuing banks, and the public gardens and parks, the general and the technical schools, the universities and the research institutes, the agricultural research stations, as well as the hospitals and health centres.

We would find that in these "capitalist" countries, the nation does not own all the houses, but only a great many of them; that the nation as a whole own many state factories, shipping lines, and nation-operated air routes. We would find that in some countries, the coal mines are owned by the whole nation, and in others, that large land, mines, forests, fisheries, banks, insurance companies, credit institutes, etc. etc. are operated by the people and for the people.

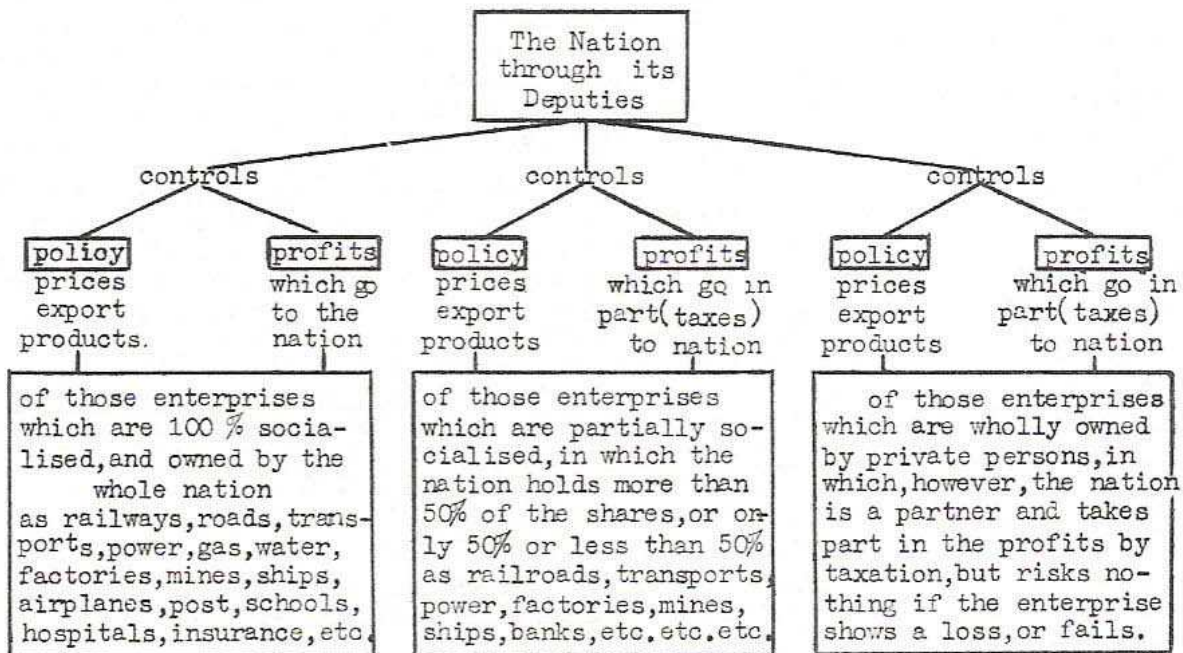
HOW MUCH OF COMMUNISM IS THERE IN CAPITALIST STATES?

But this is not the whole story. We may go out into the country and ascertain the property, which is held and operated by the community, the common pastures, land, brooks, mills, etc. the farmers co-operatives with their commonly owned trucks and tractors, factories and selling organisations, and we may come to the conclusion ^{that} this is socialised, a 100 %.

In going in this way from one item to the other, we may find that many means and instruments of production are either 100 % or less socialised in the capitalist countries, that many means and instruments of productions are wholly owned by the whole nation, which means by every member of the nation.

But again this is not the whole story. The government, that means the deputies, elected by the people to do the controlling, control the so-called privately owned means and instruments of production, either by possessing a large amount of shares, or by directing their price policy, their profits, through law ^{and tax} /ation, etc. In fact, we would find that the people, that is the nation, that means every member of society is a partner in those "private enterprises". To grasp this, we have to draw up a formula

Ownership of the means and instruments of production in a "capitalist" country.



From this structural formula it becomes clear, that there is no clear out division between a "socialist" state and a "capitalist" state. There might be one, if we compare some potentate "states" in Africa, but if we examine the much accused "capitalist countries" such as Great Britain, France, Holland, Belgium, Denmark, Sweden, Norway, Australia, Canada, the United States and many other states - all so much abused by the communists, we find invariably, that they too are socialised, and to a large extent. In these capitalist countries, large enterprises, important means and instruments of production are owned wholly or partially by the nation. Moreover the private owner of some machines will be controlled, as to the safety of the machines, as to the quality of the products, as to the prices, and as to the profits. He may, in times of emergency be told what he must produce.

So far, these statements can be proved. Students in the universities, may engage in working out how much of the insurance business is owned by the nation, how much is partially owned by the nation and in what percentage the profits are divided between the nation (through taxes) and the share holders - who in turn must surrender again a part of their earnings to the nation by personal taxation.

Any socialist, who studies the facts, cannot deny the validity of such calculations, if they are performed in a scientific manner. This means, if international units are used, kilowatts, horsepower, tons per mile, gold units, bushels, shipping tonnage, etc. etc. However, he will point to the weak link in the formula, the mind symbol for the controllers.

He will tell you, that the minds of the controllers (the deputies) are influenced by the minds of the men of business. They help each other to get rich - and they are rich.

Now rich, in the sense of much earthly addition carries the vague symbol much. So, we better check up the real THINGS, and we find in the so-called "capitalist" countries many people, who possess fine houses, cars, factories, etc. etc. They are "rich", no doubt.

On the other hand, our friend the socialist will point out that the standard of living in the United States is very low for many people. So, again we have to check up with the THINGS people get in the United States, and we shall find that a certain percentage of the population earns less than 100 Dollars a month, and with this money they can buy only a quantity of items, as follows. Compared with what rich people can buy with their earnings in the United States, it is very little indeed.

"See what I mean", would the socialist say, "I don't deny that an immense property and many public utilities, etc, in the United States are owned by the whole nation, are in fact 100 % socialised. But your system enables some people to get very rich, whereas others remain very poor. That's "Capitalism" against "Socialism".

Again we are confronted with these two words, so complicated in meaning "Capitalism" and "Socialism". To resolve their meanings, we have to get down to the real THINGS. Both are systems for groups of human beings to live together a good life. But good being a vague EVALUATION, we must translate its meaning again into THINGS. Good in a human mind means: food shelter clothing hospitals schools entertainment and last but not least work to get all this.

Well, we have the socialist countries, which have not 100 % socialism, but less of it, to say a figure 85%. Then we have the capitalist countries, which have 30% or 40% or 50% of socialism. From the foregoing paragraphs we have learned of the undeniable fact, that there is socialism in the capitalist countries. The social democrats, moderate socialists, etc. try to point this out time and again, and thus the question for many people who argue, resolves into this: "What is better, the 85% socialism of Soviet Russia, or the 30% socialism of the United States, or France, or Sweden?"

The EVALUATION word in this question is better, so we must translate this again into THINGS. What community gives the labourer what THINGS? How much in THINGS does a labourer in the 85% socialised Karelo Finnish Socialist Soviet Republic, and how much does he get in the (say) 30 % socialised "Capitalist" Finnish Republic, and how much does he get in the other neighbouring "Capitalist" country, the kingdom of Sweden?

The proof of the cake, is to eat it. Although this is an awful metaphor, real cake is involved. How much cake can a labourer get in the various communities on this earth? We know that it is useless to count in Rouble, Pound or Dollars. So the chemist will provide us with an international currency: calories, balanced as to proteins, fats, and carbohydrates. How many calories can a labourer in Soviet Russia, or in Sweden, or in the United States or in Iraq buy with 8 hours of work. If he can buy say 12,000 cal, and he needs 8000 for himself, wife and 2 children, what else can he buy with the equivalent of the remainder of 4000 cal. We could thus calculate, the rent for a square foot housing in cal, the cost of a table, the ticket for a cinema, etc. etc.

Instead of throwing the words "Capitalism" and "Socialism" on each others heads, we could raise a cry:

"Proletarians of all countries, unite to weigh and compare!"

Weigh and compare the THINGS which your work can buy in your country. Use the chart as drawn up on page 505. Let the best system win. If all these countries claim to be a Democracy, then the Democracy which gives the greatest amount of THINGS to the greatest amount of their people should be the winner, and we should study its method to repeat them in those Democracies, where the people get less of the good THINGS.

If we try to reason in this way, use the reasoning of the mathematician, the chemist or the combination of mathematician-chemist the reasoning of the housewife and the grocer, then - the communists will have to do a lot of explaining.

And they do a lot of explaining. They explain, why the people in Soviet Russia have to go without many THINGS, which are considered a bare minimum, why 2 or 3 or 4 families have to live in one flat or one room, why the housewives have to share a kitchen, why they can't get THINGS in the stores, which are available in abundance in other countries and why people have to form long queues and have to spend millions of waiting hours every day for the last 30 years to get the little which is available.

No communist can deny the fact that the standard of living (when measured in THINGS and ACTIONS) of the workers in the communist countries is much lower than in many "capitalist" countries. True enough, they may get some free tickets to state theatres, and thus the cultural standard has been raised, but if we add up all the THINGS and ACTIONS, the worker in most European states, and in Canada, Australia, New Zealand, not to speak of the United States is much better off than his fellow worker in the Soviet Union. Again, we can express "better" in measurable units. We shall not deny the fact that millions of people in the partially socialised democracies like the United States, Great Britain, France and other countries are poor and the system advocated in this book "to weigh and measure" enables us to say how poor they are. But this very same system, applied to the people in "socialised" countries, will tell us that the workers there are poorer, and again we can translate this word into measurable units.

Now, you may denounce me as being not impartial. This EVALUATION word is a meaning in our heads, and it does not correspond with nature, in which anything is structurally related to each other. No man can be "impartial", everyone is part^{of} and partial to the things around him. But the scientific method gives us a means to compare and to measure. If the socialised countries would provide more for their people, then the peoples in the democratic countries with free elections would vote communist. Instead the communists win only a few percents of the votes. Therefore they have to resort to force, co-ercion, and coups to get into power, and once there, they have to restrict free elections, they have to instal a secret police, concentrations camps and other means to frighten the people into silence and obedience.

We all know how far from "perfect" (again an EVALUATION word not corresponding with nature) the so-called "free democracies" are, how much misery, corruption and fraud are found there. But there, a man could stand up against all this and raise a cry and he can shout it over the roof tops, until the cry is taken up by millions of other citizens, until the newspapers take it up, until the senators are flooded with letters, telegrams, deputations, committees who threaten them to turn them out of office at the next election if they don't do something. And these citizens will shout, because they know there is no secret police, which can make them disappear over night.

And this is just the difference, and it makes all the difference. It leads directly to improvements in the lives of the citizen, and again the vague word "improvements" can be translated in measurable units. There is a structural relation between the fact that the "free democracies" (see the structural formula) have a wealth of universities, research institutes, museums, theatres, factories, production, millions of houses with many amenities and a high standard of living (see the structural formula) on the one hand, and freedom of speech, opinion, thought association, opposition, etc. etc. on the other hand. If a customer can reject goods in a not state-owned store, if a worker can walk off his job and take a better one, if an engineer can reject a method and can strike out on his own to make a better product, things must improve.

In a socialist state, there must be freedom of thought, of opinion, of association and of chasing out the men on the top by means of free elections. Now we witness that certain socialist states are having just the contrary of all this.

I have been an engineer since my early boyhood. I weighted and measured. When in 1917 socialism was installed in Russia, my hopes were high. During the last 30 years I have followed with greatest interest the development in the Soviet Union. I have read the official books, studied the official figures, looked at the official pictures, but I looked at them with the trained eyes of an engineer - and my hopes sank from year to year.

But it could have been just the other way round. The peoples in a socialist state could have achieved the highest standard of living. Once the "drones", the aristocrats, the rich idle loafers had been chased out or killed off, nothing was there to stop them to show to the world what socialism means and what socialism can do in improvements.

You can't denounce me as being "anti-socialist". I advocate the scientific method: "weigh and measure". This method was successful anywhere.

As said before, the communist do a lot of explaining. They don't let you into their state to see for yourself, and weigh and measure, but they give you many words instead.

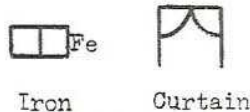
Now, here is a method, which I call semantography, and which enables you to apply the scientific method "weigh and measure" also to words. It enables you to weigh and measure the words of the "socialist" and "communist" leaders, as well as the "capitalist" leaders.

Semantography for a better future with more of the good things.

In all these highly controversial, highly partial paragraphs, the reader should not lose sight of the fact, that semantography may be a helpful tool for bringing the better future about. At present, the intelligent people in every country are locked in a terrific struggle with each other. They hurl words against each other: Here Socialism, here Capitalism, Here Oppression, here Freedom, and many other words. We need a tool to recognize these vague meanings which have different meanings in a different sentence and in different minds. If we recognize these vague meanings, we may be able to get behind the words and compare the THINGS and ACTIONS behind the words. Semantography could be that tool so much needed to preserve peace. Read what Bertrand Russell said on page 1 in the 1st book.

In the following lines I shall cite some sayings of important people about important matters. I shall translate the relevant words into semantography, fully or partially, and show how we get misled by words.

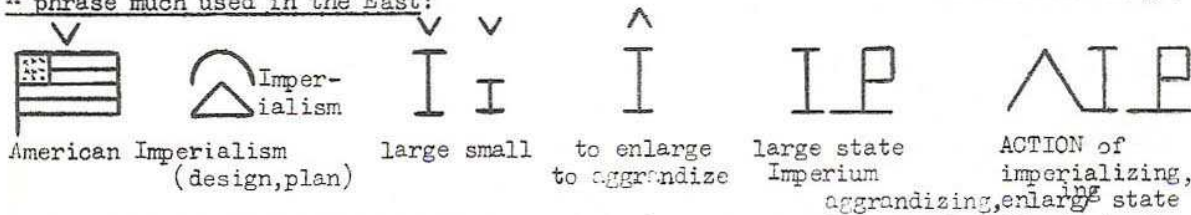
A phrase much used in the West:



This phrase exasperates communists. They maintain that there is no "iron curtain", that this is a metaphor to mislead public opinion. In fact, a continuous stream of information comes from Soviet Russia, certain foreign observers are admitted, etc. etc.

The phrase should be abandoned. We can examine the information coming from Russia with the new reasoning, advocated in this book. We can thus find out the vague phrases and the concrete meanings.

A phrase much used in the East:

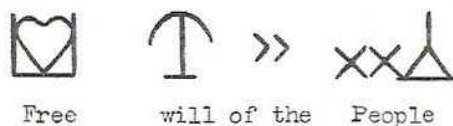


Imperialism indicates a design, a plan, but the word itself does not indicate in the least what this design is. The only meaning it contains is Imperium, which indicates a large state. The activity of an Imperium means apparently - in the interpretation of the communists - to enlarge this state, to take in more territory, to spread the "sphere of influence"

Fortunately, they have added an adjective American. So there must be various other Imperialism. How about Soviet Imperialism? How about the incorporation of Lithuania, Estonia, and Latvia, parts of Finland, Poland, and Roumania? How about Communist Imperialism? How about Czechoslovakia, Bulgaria, Hungary, Roumania, Poland, Yugoslavia, Albania?

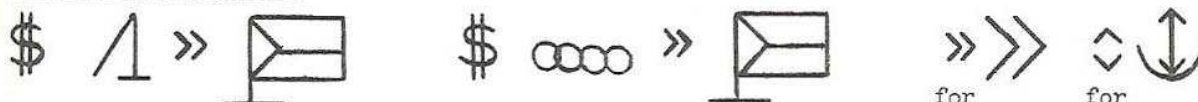
This is not Imperialism. This is

Another phrase used on both sides



Free, being an adjective and a mind reaction, vague and relative in meaning. Will is depicted by an individual and his mind. People indicated by many, many citizen. If we assume say 100,000 citizen, we have 100,000 different minds. At best, it can be a majority of say 50,001 citizens. Then the will of the remaining 49,999 is ignored. But how about the free expression of their will? Are they free to express their will to their hearts desire? Only if there is a secret election, with no secret police interfering. At present a voter is not afraid to cast a secret ballot paper in some Western countries, but not in the East, where in most cases he has no possibility of opposition.

Phrases on both sides



"Dollar aid for Czechoslovakia" say the democrats. "Dollar chains for Czechoslovakia" say the communists. Purpose the symbols. Exchange the symbols.

From an exchange of letters between Marshal Stalin and Marshal Tito:

Marshal Stalin wrote: "Yugoslav personalities had acted like Pharisees!"

Marshal Tito wrote: "However much we like Russia, we must not under any circumstances love our own country less."

No underlining of terms is necessary. The reader may get his Bible and study the "likeness" of the actions of the Pharisees with the Yugoslavs. Tito likes and loves, much and not less. And now think that all this is printed, and read and believed to mean something.

From the debate in the House of Commons about the nationalization of the steel and iron industry.

The Minister for Supply, Mr. George Strauss, said:

"When the directors are weak or the management below standard, the corporation to be set up will cut out the dead wood and appoint new men, many of whom will be drawn from ranks not normally considered for posts of high responsibility."

Only an engineer with management experience may grasp the vague meanings indicated by weak directors below standard. For the man in the street, these words may seem clear enough, especially the "cutting out of dead wood". But who are the men, not normally considered for posts of high responsibility? What ranks? Politicians, or men without engineering and managing education and experience? What appointments are meant by all these vague words?

Mr. Molotov in his speech before the Moscow Soviet in celebration of the 1917 anniversary.

"The Soviet Union is carrying out Mr. Stalin's peaceful programme. The best and most hopeful assurance of peace consists in the further strengthening of our country's might!"

The communists are usually telling the world that they are peaceful. It seems clear. Even if the substantive noun peace may indicate the absence of definite ACTIONS, the adjective peaceful may be hitched on to any other word, for instance peaceful penetration, and so we may have a peaceful strengthening of the country's might. But what means might? The might of Russia's deposits of raw material. The might of its education? The might of its ideas? Or military might? Might again is an adjectival noun.

But if we take might to mean military might, then Russia and the United States are "strengthening their might!" However the one will believe that this is a peaceful programme, the other will think that it is not peaceful - or vice versa.

The only "sane" thing we can do in such circumstances is: strike out the adjectives and look what is going on/the different countries, in Europe, in Asia and elsewhere. What ACTIONS are taken there?

The reader is asked kindly to peruse foregoing chapters, especially the one in the synopsis (page 142 this¹⁴² edition). He will find there some examples, which are also listed in this chapter, but treated here in a more comprehensive way, assuming that the reader has already absorbed the rules and methods of semantography. I have found, that some people believed, it is necessary to translate everything in semantography in order to find out the vague and concrete meanings. I want most emphatically to stress the point that this is not necessary. Once you have been trained to write^{down} some sentences in semantography, you may forget the actual symbols for different words. If you retain the idea and the simple method of recognizing^{the} the meaning of a word (whether it represents a THING, ACTION and/or EVALUATION) you are able to analyse any statement you read in the papers, or hear from a speaker. In fact, after some training, you are able to recognize such meanings immediately.

For this reason, the listed examples on this and the following pages are not translated into semantography. In the chapter (page 142 this¹⁴² edition) you will find only the mind symbol placed on top of some word, without attempting to symbolize the word. Once you realize that a certain word must be symbolized by the mind symbol, you know, that it refers to a meaning in a head, and needs further specification as to real THINGS and ACTIONS in order to take on some definite meaning.

From this point of view the listed examples^{are} to be studied and analysed. And the reader with leanings either to "right" or "left" must realize that any statement can be analysed in such a way, whether it ^{comes} from friend or foe.

From the resolution of the International Congress of Intellectuals at Wroclaw, Poland

"A handful of self-interested men in America and Europe, who had inherited Fascist ideals of racial superiority and denial of progress, were once again making an attempt against the spiritual treasures of the peoples of the world."

The words in this resolution which have a real meaning are men, America, Europe, peoples, world. They refer to real THINGS, humans and parts of this globe. However, all the other words are human EVALUATION words, vague in meaning. You can inherit THINGS from an uncle, but you cannot inherit ideals, and even less can you inherit denial of progress. If I tell you that you have inherited ideals and denials, you may scornfully answer: "I have not" and I shall have no possibility to prove that you have inherited them after all.

And what are spiritual treasures? This phrase seems to have such a concrete meaning, that I am sure of the scorn of many readers against my attempt to discredit this phrase. We can give this phrase concrete meaning if we refer again to THINGS and ACTIONS, for instance the books, which we got from Shakespeare, from Spinoza, from Goethe, from Rousseau, from Tolstoi, and from others. The Symphonies which we got from Beethoven, Tschaikevsky and others. Through the ACTIONS of printers and publishers, these spiritual treasures are now spread over the whole world and appear undestructible, unless you assume that the whole world goes up in flames.

However, if you say that "Freedom of Speech" is a spiritual treasure, you have used the vague word "Freedom" and we have seen elsewhere that this is a vague meaning and can only be defined, by referring to definite THINGS and ACTIONS.

The Very Reverend Hewlett Johnson, Dean of Canterbury:

"We are rightly proud of the great freedoms we British people have given to the world. Freedom of speech, freedom of press, freedom of association and the like. Russia, however, is equally proud of the great freedoms she has given to the world - the right to every man and woman to work, and to adequate pay for work; the right to rest and leisure after work..."

We have already discussed the vagueness in the words freedom of speech, freedom of press etc. (p. 499), also the controversial meaning of right (p. 498). Here we shall discuss the adjective adequate. Being an adjective, it may be evaluated differently in different brains. What the boss or commissar may consider an adequate pay, the employee and worker may consider not adequate at all. During my life time, I have not found one man (including myself) who thought that his pay was "adequate". I have seen how general managers, whose pay was sometimes 100 times higher than the pay of his secretary, quarrelled with the board of directors, with the shareholders about their pay, "wholly inadequate" to the services rendered. In fact, all the strife in industry and commerce in any country rages about this meaning "adequate pay". But for the Dean of Canterbury, the Russians have it. But are they allowed to say openly that they are not adequately paid? No! So they must be adequately paid. And they have the right to rest and leisure, whereas the people outside Russia have not this great freedom.

It seems all so wonderful on paper. Really, semantics takes the gusto out of reading.

Banner headline in a Berlin demonstration November 1948

"Marshall plan means war!"

Well, here you have it. Semantics in action. A line from a dictionary. Look up "Marshall plan" and you find the meaning: war. And how cleverly made. The semanticist who invented this line, did not say: Marshall dollars means war, or Marshall aid means war. But a plan may mean anything. See p. 155 this 2nd edition.

And so it seems we will have war, and pretty soon, because on the other side a similar kind of semantics is practised; the tossing of words which seem so clear to the writer and to many readers, but very often defies translation in definite THINGS and ACTIONS.

From The ABC Plan for World Peace by Ely Culbertson in Readers Digest, July 1948

"Revision A provides that in matters specifically concerning aggression and preparation for aggression the right of veto by any single state will be abolished.

In all other matters involving national sovereignty, however, - such as self-defense, taxation or immigration - the veto right will be retained. The right to veto is the right to be sovereign, and the right to be sovereign is the right to be free."

Wonderful words. But there is a hitch. The meaning of aggression and preparation for aggression is not defined in the whole plan. Is arming a preparation for aggression? Yes and no. Is the declaration of war against another country aggression? If yes, then England and France were aggressors when they declared war on Germany. The German people were induced to think so. They defended themselves against the other aggressor, Poland, who started to shoot first, (according to Goebbels' fabricated reports).

Is aid to Greece and Turkey aggression? And is aid to the Greek guerillas aggression? Is sending arms to China aggression? Is the establishment of a communist government in Czechoslovakia aggression? Is the incessant communist and anti-communist talk over the radio waves preparation for aggression? What for heavens sake "is" aggression? The Russians and the communists in all countries think that the actions of certain Americans mean aggression and the preparation for aggression. And the Americans think that certain Russians and communists practise and prepare for aggression.

G. B. Shaw wrote recently a letter to the Times, urging the production of a new political dictionary. He said:

"The matter is extremely urgent, for the present confusion of tongues is heading straight for war, which none of the powers can afford and nobody desires... Negotiation is impossible unless the parties use the same words for the same things and understands what the words mean. The present Babel threatens a war nobody wants..."

"I myself find it impossible to make myself understood, though when I describe myself by this or that adjective I know precisely what I mean..."

And I may add, that Shaws adjectives are just evaluated differently by others, believing that they know precisely what they mean...

I maintain that a new analysis of phonetic writing, such as advocated in this book, may help to clear up the confusion. The new political dictionary which Shaw demands must somehow mark those words which mean one thing in one mind and another thing in another mind. Semantography gives us these marks, and it helps us to translate such meanings into meaning of physical ACTIONS of chemical THINGS.

Aggression is the verbal noun, stemming from the adjective aggressive. Aggression means to be aggressive. It's a meaning in our head, applicable to many ACTIONS. The only thing we can do is to draw up a structural formula for this meaning. Aggressive mean (1) slapping one's face, (2) stabbing people, (3) wounding people (4) killing people etc. etc.

And in the next column (1) smashing other people's property (2) breaking into closed houses (3) carrying away things which are owned by other people, etc.

And in another column (1) stopping people saying what they want to say (2) Imprisoning people for what they said (3) Threatening people to imprison them if they say... etc.

And so slowly we would build up a formula which would contain meanings referring to definite THINGS and ACTIONS. But as we approach other meanings we would soon face the meaning of "democracy" and "government of the people" and we would have to look up those special formulae. And so little by little we could try to replace EVALUATIONS by definite THINGS and ACTIONS. In other words, we would apply the method of the chemo-physicist.

During the last 30 years we have witnessed strange happenings. We have seen in various countries, in Italy, in Germany, in Austria and in other countries (which profess to be "democratic") how certain men and parties undermined the state by using and interpreting those democratic institutions / "freedom of speech", "freedom of strike", "freedom of election" etc. to destroy that democracy. Once in power, they have found other words: "freedom of speech, of course, if it is in conformity with the interests of the people. Strikes are not in the interests of the people. Certain persons, etc. are the enemy of the people. Well, we hear the same words in countries, which profess still to be a democracy, for instance in the United States, and Great Britain. There is however a difference. These countries have no secret police. People don't disappear there, for saying something. In Germany people did disappear. Now the Gestapo is gone, the Germans in Western Germany strike, riot, demand, accuse the Western powers. But in Eastern Germany there are no strikes, no riots - why? Because people do disappear there. And disappearing means something which the physicist can observe. Believe me, it works. It convinces those who are not convinced by the words. They can translate it into chemical THINGS: no wife, no child, no home, no ... and sometimes no life.

We must learn a new kind of word analysis, and we must learn to observe, weigh and measure. We must get away from the words.

Today, words are poured out incessantly from all sides. Anyone who has a smattering of rhetorics, of semantics, of the working of the syllogism, of debating tricks in general, is usually appaled when listening to a political speaker. One fallacy of speech follows

(526)

another. But most listeners don't find these fallacies. They listen reverently, and all what the revered speaker says, seems so "correct," so "true," so "irrefutable!"

In many cases, political speaker are unaware of the fallacies which they commit. They did not learn of rhetorics and semantics. They believe that their belief is the "true" belief that their fight is a "just" fight, and they do not realize that they are ^{often} deceivers who deceive ^{others} and deceive themselves.

Fervent fanatics, who believe that certain words have a definite meaning are ready to die and ready to kill. The story of revolutions is full of the martyrs, who fought for the revolution, but who sooner or later mounted the guillotine or faced the firing squad. Why? Because of a difference in opinion with their friends. A different interpretation of words with some vague meaning.

Today however, whole nations have to pay for the differences in opinion of their leaders. And we are faced with the prospect of another world war.

We must build a bridge over the abyss which separates today the people. This is a metaphor, and in fact, there is no abyss. The people on both sides don't want to fight each other. They know what it means in THINGS and ACTIONS. They want peace.

One way to peace, is the study of semantics, the meaning of words. It seems more important than any other school item. This item refers to the people who can read and write.

Then we must teach the other people to read and write. They make up today about 75% of the world's population; yes, three out of four people on this earth cannot read and write. Is this important for "democracy" and "peace"? Yes it is.

A new book appeared in 1947 "Language in Society" by M.M. Lewis (106). The writer discusses the aspects of language in society. What has happened since the introduction of compulsory school education, the press, the radio, he calls a "Linguistic Revolution". And he says:

"Make a man literate in order to govern him, you may make him more able and more urgent to govern himself."

and he refers to the large masses of illiterate people, for instance, in Africa, and quotes:

"The Advisory Committee of the Colonial Office on Mass Education in Africa (1943) says: "So far, in the British Colonies, we have acted on the assumption that people would eventually adopt improved methods of agriculture... without learning to read and write." But all the evidence, they continue, shows the futility of this assumption. Universal adult literacy is the first essential in the organisation of a community for the improvement of techniques of living, and all literacy must be specifically directed towards these techniques. "The content of the material used in teaching reading and writing should be related to the people's needs and interests, and it should assist in stimulating their desire to improve and control the conditions in which they live!"

The Russian leaders have come to the same conclusion, and we know about the great strides which had been made in Russia and Siberia to eradicate illiteracy. We know too that the Soviet Constitution was given to the peoples of the Soviet Union in 1936, nearly two decades after the revolution. We may hope that the methods which Russian leaders still believe to be necessary will be dropped in later years, and opposition parties may compete with each other in bringing the "greatest amount of good to the greatest amount of people".

I propose semantography as a new mode of writing, suited to be taught to the many tribes and people in Africa and Asia and other parts of the world. It can be easier taught than any phonetic writing, which uses an alphabet. It cannot be outmoded in a few decades, when pronunciation has changed. And it can be printed in books and papers for the whole world, to be read in any language.

I believe that the leaders of the Soviet Republics may make good use of semantography. At present they must handle publications in more than 60 different languages. Semantography may give an advantage, unheard of in the communication of language and thought.

I hope that many readers with socialist leanings will try to understand my reasoning.

If you think that socialism means the advancement of mankind to a "better" life, I am a socialist. If you think that socialism means eradication of the misery in our world, I am a socialist. But we must be clear about the meanings of these words "better" and "misery".

I am aware of all the shortcomings of this manuscript, which I typed directly onto the wax stencil. I know that any sentence of mine can be attacked with the weapons I tried to create. But at least I am aware of the fallacies of words and language.

These meanings "Democracy", "Socialism", "Freedom of Speech", "Freedom of Thought", etc. are today part of our creed, of our religion, of our believe in the purpose of our lives. For this reason, so many people believe fervently in them, and this leads us to the last group of chapters on the most difficult subject: "Religion"

RELIGION

"All through the eighteenth and nineteenth centuries it was assumed that man is a rational animal and that the force of reason was gradually civilising us all; but all the while the state of the world was not becoming more reasonable but more chaotic. The two world wars were merely outward and visible signs of the chaos into which the mind of man has fallen.

As Nikolai Berdyaev puts it: "The period of contemporary history governed by reason has come to an end. This is the age of the emergence of irrational forces hitherto kept in subjection!" It is quite true. We now see, if we have eyes to read the signs of the times, that man is not an entirely rational animal; that his soul is the playground of dark powers whose existence we had ignored or forgotten.

And this sinister force is not to be overcome by the weapons of logic however bright and sharp. A faith is what we need; and the old faiths have slipped from our fingers, and we are left to forge or find a new one, a new conception of the purpose of human existence, a new vision of the high destiny of man. Without this, chaos will continue to reign."

Walter Murdoch (21)


A few weeks ago, a new book came into my hands "A planned auxiliary language" by H. Jacobs (London, Dennis Dobson). I have cited quotations from Mr. Jacobs' writings in previous chapters. In this book, Jacobs gave an interesting and illuminating summary of the auxiliary languages in the forefront of the movement, Esperanto, Ido, Novial, Occidental, etc. He lists their special features, their grammar rules, their prefixes and suffixes, etc. etc. He shows how much research has gone already into all this, and he convinces the reader that - once an international commission is entrusted with the task to choose an auxiliary constructed language - it will be able to choose those features, which have proved their worth.




I was filled with envy when reading that book, and comparing its content with the content of this book. The great difference between an a posteriori constructed language and an a priori language came sharply into focus. The planners of an a posteriori language had an easier task. They took the root words from already existing languages (a posteriori). If we compare the following English words: w-a-r, i-n-v-a-s-i-o-n, a-t-t-a-c-k, we see that they are composed of sound symbols a b c d etc, but there is no inherent connection of meaning indicated ^{between} these words, as they are written down and pronounced. Peano chose analogous words from Latin for these meanings. Hogben chose the equivalents in Greek; Zamenhof, in his Esperanto, chose equivalent words from Latin, Greek, German, and Russian, and in a similar way did the other planners choose their words a posteriori, from what has been made before in language.


However, the planners of an a priori language started from "nothing" in regard to their words. They were free to use any sound, but they realised that their new words must be built up, not in a hap-hazard way (as the naturally grown languages), but according to logic and meaning. In their language, their words for w-a-r, i-n-v-a-s-i-o-n, a-t-t-a-c-k, must continue a syllable which must occur in all three words, because their meaning is indissolubly bound up with each other. On page 46 I have mentioned Dalgarno, the first man to invent an a priori language. He used the letter K to indicate political matters. The vowel u to indicate military matters, so Ku means war. Consequently, the other words invasion and attack would begin with the syllable Ku, perhaps as follows Kuti = invasion, and Kul = attack. ti and l would again signify certain meanings.

Semantography is a geometrical written language, with distinct features. It may be called a a posteriori because it uses already existing symbols as 1 2 3 4 5 6 7 8 9 0 ? ! + - = , . ; : % etc.

On the other hand, semantography may be called an a priori language, because the other symbols are newly created. The great difference between the old a priori systems, phonetic like Dalgarno's, and geometrical like ^{Bishop}Wilkins (see p. 46) on the one hand and semantography on the other hand, is that the former systems used wholly arbitrary letters or lines with no indication of the real THING for which they stand, whereas semantography uses symbols which somehow outline the real THING.

In Wilkins' geometrical language, military relations were expressed by this line 

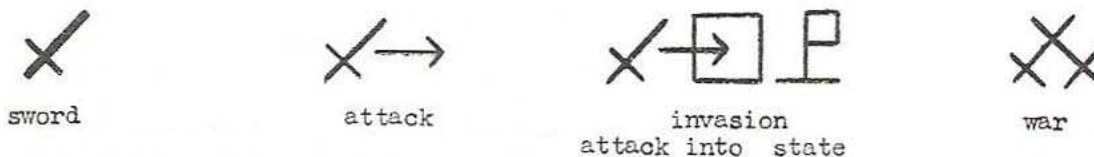
This line is wholly arbitrary. The outline  does not in any way indicate something connected with military relations. Wilkins chose a slightly different symbol  to indicate church relations. Your conclusion is wrong when you believe that Wilkins wanted to have the meaning of military relation and church relation bound up by a similarity in symbols. Wilkins was a bishop, and a scientist, one of the founders of the Royal Society. The opposite symbol of church relation drawn up by Wilkins thus  means naval relations. Please look up his basic symbols on page 46 and you will see that they all consists of a horizontal line, with some second line added. You will agree that there is no meaningful connection in these basic symbols. They are arbitrarily chosen.

But once Wilkins chose this symbol  to indicate military relations, then his symbols for war, invasion, attack, must contain this basic symbol, perhaps as follows



You may agree, that these symbols are again arbitrary, except for the fact, that they all contain the basic symbol for military relations.

The difference in regard to semantography can be seen by its corresponding symbols. In semantography the outline of a sword is used:



You see that the semantography symbols contain the outline of a sword. A state is indicated by the outline of a flag over the earth line. Into is indicated by the direction into an enclosure. All these outlines are "natural", they somehow correspond with the outline of the real things. And we are therefore not surprised that the symbol of the crossed swords has been adopted thousands of years ago to signify war, because this is what actually happens, even today, in close combat. All these symbols are not arbitrary, except perhaps the symbol of the arrow which today does not indicate an arrow, but a direction, or a movement into a certain direction.

You see now the differences between "a posteriori" phonetic languages, a priori phonetic languages, a priori geometrical written languages and semantography. In a priori languages the inherent meaning of related words must become visible. Their symbols must be formed in a philosophical manner, and therefore "a priori" constructed languages are also called philosophical languages, because they must be built up by contemplating nature.

Modern language planners, in particular Bodmer and Hogben in their "Loom of Language" (5) said: "Leibnitz knew something of Dalgarnian as well as Wilkinsian, and rejected both of them for not being "philosophical" enough."

E. Sylvia Pankhurst in her book "Delphos, the Future of Language", said: (4)

"Leibnitz desired the creation of a language, which should be an instrument of reason. The words must embody the definition of ideas, so that they may be deduced by algebraic transformation. He argued, that all complex ideas are the product of simple ideas, as is the case with figures."

Ogden and Richards, the authors of the standard work on semantics "The Meaning of Meaning" (17) said: "What Leibnitz desired was a script or notation, similar to that of the Chinese, but "better than theirs", and he thought that this "might be introduced if small figures were employed in the place of words, which would represent visible things by their lines, and the invisible, by the visible, which accompany them."

But unfortunately Leibnitz never produced a single symbol in all his writing, and Ogden and Richards sum up the situation by saying:

"This speculative construction, which... was constantly in his thoughts, especially about the year 1679... still remains where Leibnitz thus left it."

I have given a short recapitulation of chapters in the first book (p 39 ff) in order to acquaint some readers with the situation. It is likely that certain readers, especially men of the church, would be intrigued by the title "RELIGION" over this and the coming chapters, and may start to read here. They may at first, consider my venture into this highly delicate realm, as completely unnecessary, as dangerous to the idea of semantography, as even ridiculous, etc. etc.

I agree with them wholeheartedly. I would have been very happy if I could have avoided those chapters on Democracy, Government of the People, etc., and now the chapters on Religion. When I set out in 1942 I had no idea of the difficulties ahead, and especially I had no notion that I set out on the construction of a "philosophical language".

Only later ^{did} I realize the mess and trouble I have got myself into. In building a geometrical language, truer in meaning than phonetic writing, sooner or later, I must stumble about the meanings of God, Creation, Creator, Nature, Religion, etc., etc. The planners of a phonetic language had an easy task. They just took some words from existing languages, and said God should be signified by the written ^{sound} Deo, or Godoy, or any other word. Religion should be signified by Religio, or Relijo, or any other word. In this manner Esperanto, Ido, and the others constructed languages have been worked out. How simple against the task in an a priori philosophical language, and especially in semantography, where the meanings should be rationally represented by outlines.

You see, there was no way out. And if I had stopped short and had not attempted the symbolization of these high meanings, my adversaries would have ridiculed the whole idea. It may be quite good for children - this semantography - but for grown-ups? No!

Even John Wilkins, Bishop of Chester, had to take a stand as to the symbolization of

—
God

and now you may grasp more easily the philosophical "line" which runs through his arbitrary symbols. All his basical symbols (see p. 46) including those which signify military relations, naval relations, church relations, etc., etc. they all contain the horizontal line meaning God. God is at the basis of all this and everything else in nature.

Bishop Wilkins was not only a churchman. He was a disciple of Francis Bacon, the father of the scientific method. He was one of the founders of the Royal Society. He was a modern scientist of his day, an experimenting chemo-physicist.

When we take up today, 300 years later, the idea of a geometrical language, readable in any language, as a practical tool for science, industry, traffic and general communication, we cannot avoid finding a symbol for election, democracy, and also for Creation and God. On the contrary, we see the world going to pieces, because these meanings have become so confused, as to be almost meaningless. Men in power, are training whole generations and nations, that there does not exist something denoting Creator, Conscience, etc.; they advocate ruthless war against other people standing in their way.

Professor Walter Murdoch, whom I quoted in the beginning, said that "the old faiths have slipped from our fingers, and we are left to forge or find a new one, a new conception of the purpose of human existence, a new vision of the high destiny of man. Without this, chaos will continue to reign."

May be, the analytical methods of the chemo-physicist which have been applied in semantography may help us to see somewhat clearer. It may help us to build up the complicated formula for Religion, Belief, Creator, etc. It may help us to find those basic meanings on which people of different religions could agree. At present, religions and beliefs are much divided, an almost hopeless indication of our confusion. May be, that a new approach, in a truer writing, may help. In any case any new approach should be investigated without prejudice. The peace of the peoples of this world depend ultimately on those meanings. For this reason, I hope to have forgiveness and understanding beforehand from all readers, especially the men of the church. This semantography is only a crude beginning, a pointer to more work and more thinking by other people.

The following chapters belong to this group, titled "RELIGION", and the reader should not be surprised, when we divert our attention to a subject, superficially remote from Religion, to Music. On the other hand, Music is the language of the "heart" of our deepest feelings. It emerges from the same depth of our mind, from where the meaning of Religion and Creation emerges.

From this we shall proceed to the meanings of right and wrong, of good and evil, etc. Then we shall examine how far modern science, chemistry, physics, biology, etc., can help us to an understanding of the forces in the universe, and its symbolization. Then we shall try to find an appropriate symbol for those meanings. Then we shall try to translate some lines of the Bible into semantography ^{in spite of the fact that} the Bible has already been translated into more than 600 different languages.

But here is just the formidable task of semantography. We must find symbols which could be accepted even by an atheist, a so-called un-believer. And this may lead to a new meaning of religion, in harmony with the most modern theories of science.

SEMANTOGRAPHY AND MUSIC CRITIQUE

"Shakespeare, dispensing with the customary exordium, announces his subject at once in the infinitive, in which mood it is presently repeated after a short connecting passage, in which, brief as it is, we recognise the alternative and negative forms on which so much of the significance of repetition depends..."

G.B. Shaw's sarcastic analysis of "To be or not to be," ^{and ridiculing} imitating the music critic.

In our times, music has become extremely popular. The mechanical means to multiply music a thousandfold, have not led to the deterioration of the appreciation of music. On the contrary, the many symphony orchestras which sprung up all over the world, are the best proof that the people are ready to appreciate so-called classical music. The radio has enabled musicians and composer at last to make a decent living and to be ⁱⁿ dependent of the generosity of some king or marquis. Records of symphonies, operas, and sonatas are selling in increasing numbers. Now you can walk the streets and hear a simple lad whistle a Chopin nocturne.

In between the composer and musician on the one side and the listeners on the other side, stands the music critic. The growing popularity of music has made it possible that newspapers employ a music critic, which has made it possible in turn, that the music critic can make a decent living by criticising music.

Unfortunately - as it happens so often - a word exercises an influence, far beyond its dictionary meaning. The word critic and to criticise has not only a neutral meaning; to investigate critically, to advocate impartially. It means also to condemn, to criticise ^{something} as being no good, to find out the faults. "He was criticised," means he was censured, reproofed, blamed. He was just "not good".

Unfortunately, some music critics - I stress that they are in a small minority - have been influenced by that derogatory meaning of "critic." They condemn, they tear down, they "cut to pieces" musicians and composers. They have done this for centuries, and they have made life a living hell for those most sensitive creatures of the human race. The history of the great composers tells of heartbreaking despair into which they have been sent by those malicious missiles, fired by the great critics of that time. In most cases, the record shows, that many critics have not recognized the genius - although they should have been able to do so, because they are supposed to be the experts, who know.

Scientists study some aspects of nature, human behaviour, etc. and we can judge their theories, and their knowledge, by the predictions they make - whether these come true or not. If an astronomer predicts a sun eclipse, if an engineer predicts that a bridge will settle by $1\frac{1}{2}$ inch when under a load of 50 tons, we will hail them as experts if their predictions prove to be in accordance with the facts.

On the other hand, the predictions of certain music critics about certain composers and their music - as being "impossible, spiritless, without vigour, bare of any creative idea, without individuality, lacking tonal texture, ^{being} static, inconsequent, illogical, etc., etc. - I could cite hundreds of such phrases from the newspapers - all this criticism has proved wrong, insofar, as those composers have won the hearts of the people at last - but, unfortunately, this may have happened 50 years after the death of the composer. The bridges of the music critic have broken down, their predictions have not come true - but they have been able to spoil the life of a genius and have embittered his days.

And this did not happen in the days, ^{only} of Beethoven, Haydn, Handel, Schubert only. It happens right now in our time, and we need ^{only} open our newspaper and read the column of the music critic to realize, that some of them are still at work. ^{beautiful} At a concert we heard, a singer whom we enjoyed, a new piece of music, which held us in a spell - we find it to-morrow torn to pieces, ridiculed, desecrated by certain music critics. And we don't get wiser by finding that what one critic judged as "ugly to the extreme", another ^{in another paper} critic extolls as being "beautiful and enchanting." Apparently some of them are not "experts" and don't know what they are talking about.

Why this confused state of affairs in regard to music critics? It may be that music is a kind of language, which defies translation into words of ordinary language. It may be that music, originating in the inner depths of a composer's soul, and brought to life by a musician, whose own soul is vibrating similarly, is a human EVALUATION which is understood and evaluated differently by different souls. Applying Freud's terms, music probably originates in the Id, being feelings, emotions, passions, which not always arouse

similar feelings and emotions in other Ids. We may even go further and say that the same tune might find us tomorrow more readily disposed than today. Our mind would react differently under different conditions. We know, that the finest concert will not give us that uplift, if we come to it, our mind heavily fatigued from a hard days work. Some months ago, there was a concert at the local conversatorium. The hall was full, but as the concert was broadcasted, the station put a loudspeaker outside the conversatorium, for those hundreds of people who couldn't get a seat. It was a very hot summer night, and the outsiders settled on the lawn around the conservatorium. The moon shone, a cool breeze came caressingly from the ocean, the people stretched out in the fragrant grass, and the loudspeaker vibrated the music into the night. Of course, it was not the same as inside, you know how a big loudspeaker can distort a symphonic concert, but nevertheless the people enjoyed it immensely, and somehow congratulated themselves, on not hav^{ing} got a seat inside, because it must be very hot and trying in the hall.

Next day, the two morning papers brought the critics. The one was enthusiastic, the other very much dissatisfied and the adjectives and metaphors used for expressing these opposite feelings were used freely by both writers. I wondered why the one critic didn't like the performance at all, whereas the other simply indulged in its glory. Then I found out. The first critic was inside, and endured the agony of an overcrowded and very hot auditorium. The other critic came too late, couldn't get in, and settled in the cool grass, with the moon and the stars overhead, and the cool breeze rustling in the palms. He heard, of course the distorted transmission from an oversized loudspeaker. He heard the occasional hooting of a passing-by motor car, but... it was so wonderful, the evening, the moon,.... and so his critic was just the opposite of that other miserably sweating critic inside.

In my opinion, much would be done for the better, if the word critic would be dropped, and changed to music interpreter, to be used instead. The critic, or let us now say, the music interpreter is a necessary link between, the composer-musician and the public. We are living in an age of experimenting. The composers try new forms of harmony, with which the public is unfamiliar. Or we may have a piece of programme music. If the listener is informed that the horrible piece, which the orchestra is now performing, reflects the impressions which the composer had in a steel foundry (in Mossolovs Symphony of Machines) he will enjoy this piece, which otherwise would be for him a earblazing jumble of dissonances. If he is told that one terrible discord should indicate Dvorak's horrifying realization, that he is becoming deaf like Beethoven, our innermost emotions will be stirred by that discord. Modern composers try sometimes to interpret this age of conflicts and confusion, which tears apart every single soul and society as a whole. If you are told that this is the meaning of the harsh dissonances, you will grasp what the composer wanted to tell you. So you see, that we have here a similar mental process as in ordinary language. The poet is trying to tell us something in music, and we need somebody to make us understand the meaning. It is semantics in music, and the interpreters are the semanticists.

Now, everyone who had some contact with composers know that they are very sensitive creatures. They try to express what moves their innermost heart and they despair when they find that their music did not express that what they wanted to say. And they are never satisfied. Their hours are sometimes full of an unearthly joy, but very often, full of misery. Sometimes they tear up the score, throw it into the flames and break down. Theirs is not a happy life. If we grasp this fact only, we may try to understand the meaning of their saying. And we should listen to those people who are the composer's friends and who try to explain what he wanted to say. They are his interpreters.

Many music interpreters have realized their task, and when they use all kind of words of the ordinary language to arouse the listeners understanding, they help him along in the appreciation of music - this "language of the human soul". Therefore they are entitled to use all kind of human EVALUATION words to interpret that "language". They may use the adjectives wonderful, enchanting, breath-taking, utter sweetness, glorious, and others, and they may use the words indicating mind actions and reactions, such as hope, joy, rejoicing, jubilant, or downheartedness, despair, desolation and mourning. They may use metaphors, like storming the heavens, thundering and flashes of light, the waves breaking and pounding the shore, surging and engulfing our souls. They may say all this, in order to help us understand the composers music. In helping our understanding they would lift us up from the level of our little lives and carry us in regions, where the eternal spheres are ringing with music. The task of the interpreter is to interpret, but not to condemn. He and anybody else will evaluate differently the saying of the composer, and no human being can say that the composer is wrong, and that his music is bad.

But there is that group of critics, who think that their task is to criticize, to tear down. If Beethoven would be in our midst, (and another Beethoven is in our midst, but we may find out this 50 years hence, when he is gone) they would pour their acid words over him, just as their colleagues did to most of the great composers in their days. When you try to find out something of the life of those "gallic" critics, you may come across the fact, that he himself has written a concerto, or an opera in his youth, that his flight was high - but nothing came out of it. Or he was a student in the conservatorium with hopes of becoming^{ing} a virtuoso - but nothing came out of it. As the years passed by and he had to make a living somehow, he turned to music critic. Sitting in his seat among the crowd, he stares up to the virtuoso or composer, luckier than he, and his heart is ravaged by envy hearing^{ing} the thundering applause. Then he goes home and pours^s out his adjectives and his human EVALUATION words: lack of originality, no new ideas, copying the style of Wagner, interminable boredom, formalism, etc. etc. - well, we all know this kind of stuff. We can read it almost daily in the papers.

Sometimes you will find critics, who can't play an instrument - but they can use adjectives and metaphors. If they try to bring the listener to a better understanding of the music by using EVALUATION words which praise and lift us up to the spheres - well and good, but if they use their adjectives to spit their venom, the public should indicate their intention to refuse to listen^{such} critics, who can't compose, who can't play and can't sing, and consequently don't know what they are criticising and what they are talking about. In many cases, they are little sadists who enjoy hurting composers and ^{ans} musici/

And they do hurt. Those singers and soloists are sensitive creatures. They have not a 40 hours week. Theirs is a 168 hours week. In their waking hours and in their dreams they have only one thing in mind: perfection, and they slave for it, worse than slaves do.

When I was a young man, I was also a kind of musician. I was even a sort of virtuoso. I played in orchestras and as soloist. I played a few times with a world famous philharmonic orchestra, I played on the radio. I enjoyed all there is to enjoy for a performing musician, the applause, the handshake of the conductor, the friends congratulating - but I learned also of the agonies of a musician, of his desolation, when he feels he is not in the mood, of his heart sinking when he believes that he is not in touch with the music and the audience. All this may be imagination, but the agonies are real. Whatever the thunderous applause, the musician who strives for perfection, will never be satisfied with his performance. He is - like the composer - his own harshest critic. He feels that he was not good, even if the newspapers tell him in the morning that he was brilliant.

But ^{some of} the newspaper critics will acknowledge a musician, ^{only} if he has already been acknowledged by greater critics and by the public. But the new-comers, those young men and women who have decided to live and work for music, they fall an easy prey to the hounds. And their hearts and their hopes are torn to pieces.

You may think that I have received such lashes in my youth and I am now resentful. This is really not the case. I never wanted to become a professional musician. I wanted to be an engineer and only an amateur in music. For this reason, the critics treated me with benevolence and indulgence. Those among them who like to condemn, attack only those who take music seriously, that means live for and by it.

And here is what I want to say in regard to semantography. I hope that it will be acknowledged as a new tool in human communication. But I would not mind, if semantography would not be used in science, industry, and commerce for interlinguistic communication. I would not mind, if the semantics of semantography would be rejected by the world at large. But I would think my life and my work ^{full of reward}, if semantography would achieve nothing else than helping those sensitive creatures, the men and women, who have devoted their lives to music. If they will - through semantography - realize that those venomous words of certain critics have no reality, that these words are only expressions of certain minds, whose evaluation and opinion is relative and vague - then I would feel very happy. I would think that my life had a purpose, and my work was not in vain. Whenever you read such words in the papers as: "without fire, non convincing, absence of that metallic tone, non-compliance with the general idea of the melody, failure to bring the development of the poetic musical image th to its logical conclusion, etc. etc." than you should know that these are the EVALUATIONS of a writer who cloaks in these words the reaction of his mind confronted by the ^{venom} of the other fellow whose music he ^{considers} bad, very bad, not good at all, and he would have done it much better if only.....

Music appreciation and musical performance have achieved today a high level. We want interpreters. We need them. But we don't want venom. It has no place in music, as it has no place in religion.

THE MORAL OF SEMANTOGRAPHY

Prospero: "...when thou didst not, savage,
Know thine own meaning, but would gabble like
A thing most brutish, I endowed thy purposes
With words that made them known."

Caliban: "You taught me language; and my profit on't
Is, I know how to curse."

William Shakespeare, The Tempest

Some readers may have asked themselves throughout the foregoing chapters: "What's the use of all this? Granted that semantography might be helpful for interlinguistic communication in science, industry, commerce, traffic, etc. Granted that people might use it for correspondence with other people in other parts of the world, be they boy scouts, or stamp collectors, or students. But what is the use of that semantic aspect of semantography, this pointing out again and again that so many words of our language and of all languages are human EVALUATION words, which are evaluated differently by different individuals? Do we really need all this?"

Such a question is very reasonable. It asks directly as to the practicability of semantography in regard to semantics. We know from previous experiences, that a new idea, a new tool, a new gadget will be used by men if it is practical, if it helps.

Well, do we need the semantics of semantography? Do we need to be enlightened about the meaning of words? Do we need to be told about their interactions in society?

Well, do we need to be told about the aspects of say, ice-cream, tobacco, alcohol and their interactions in society? Ice-cream is something good on the palate, and its making and eating has spread over all boundaries. It's international.

But suppose, it would be a drug like marijuana. Why, we would have lectures and articles, bills and laws, and the police and social workers seeking out the victims and hunting up the makers and distributors. We may say: its good on the feelings in the hours after the taking, but it's bad in the long run. And this bad can be directly translated by the doctors in nervous breakdowns, disease, collapse and destruction.

Alcohol too is something very good to the palate and to the feelings after taking, but it's bad in other aspects. Hundreds of books have therefore been written, doctors have lectured and have shown that alcohol kills more than all the diseases and plagues together, besides the breaking up of families, and causing untold misery. We know the fight for prohibition, and we know too the reactions of "human nature". When alcohol is prohibited, most boys start to carry a hip-flask.

Language too, is something very good. It enables us to communicate with our fellow-men. It enables us to read and enjoy poetry, and other writings. It helps us to relieve our anxiety, to get advice, and help others. It enables us to live in a community. So far, language is good, very good.

The only setback would be the difficulty in promoting communication between people who speak different languages. To overcome this, Esperanto and other international auxiliaries have been proposed, and I propose semantography for reading and writing. But so far, there is nothing bad about language, a "badness" which we could translate into actual destruction.

However, under certain circumstances, language can be bad, very bad. We know that language can destroy, can cause wars, can bring strife in the nation and in every family.

The peoples of the world chatter away incessantly. There would be no harm in this. But we must realize that many words in many contexts are "missiles". They are fired with intention to wound, and these missiles do wound.

Now, you may say that these last sentences express a metaphor. But just think about a scene, which happens in almost every family. One word, shot out against one member of the family over the breakfast table, will make this member often unable to speak, to continue to eat. Blood will be rushing to the head, sweat will be execrated, even fainting will result. The victim will be brought to bed, will fret in agony, will vomit, will refuse to eat. The doctor will be called, and may order transfer to a hospital.

And all this caused by just one word. And usually it will be an adjective, or a thing-word coupled with an adjective, or some other human EVALUATION word.

You may say, that this is an exceptional case. Granted. But you know that missiles can wound slightly, and there are small missiles and big missiles with great destructive power. Just think that the so-called "bickering" is going on all over the world, in all countries, in all towns and villages and in most families- to a greater or lesser degree. It starts in the morning, is continued during the day (also in the office and the workshop), and sometimes it goes on at night, after the lights have been switched off.

"I thought you are thoughtful, but now I think that you are thoughtless."

"You never think of other people, always egoistic."

"You pay only little attention to what is said."

"You think you are clever."

"You don't care for the children."

"You are full of hate."

"You are lazy. That's what you are."

"I believed in you, but now..."

We could go on and on, citing hundreds and thousands of words and sentences, in which the missile is formed by a human EVALUATION word, or a group of them. We know how much our lives are made miserable by such conversations. Just realize that most people suffer throughout the world their little and their great suffering, caused by words. There is enough misery in the world caused by floods, droughts, storms, tidal waves, earthquakes, depressions, and wars. In such miseries, chemical THINGS and their ACTIONS are involved. But such miseries and upheavals, don't occur very often. In fact, they are rare.

But the misery, caused by human EVALUATION words goes on and on, 24 hours around the globe and wrecks our happiness and our lives.

And now, just think that someone would have invented a gadget. Something which you can carry with you, which everyone can afford, which everyone would learn to handle. And such a gadget would at once, relieve you from the misery caused by all the bickering. More than that; if people would handle this gadget for a long time (say since their childhood) bickering would not even start. A few people ^{today} know the secret, and they live a happy and serene life ^{are} in harmony with the people under the same roof. But they usually can't teach their secret to others.

Well, a gadget which would help avoid being hurt by words, would be a grand thing - wouldn't it? It may be more in demand than any other practical gadget, and it would be more practical than any other practical gadget. Practical gadgets help us to a more comfortable life, and nothing would be more comfortable than to have no bickering about the place, no hurting with words, no discord, no fight and misery.

Well, we can't expect any gadget to work miraculously - but I believe that semantography is just that gadget, which could teach us the meaning of words.

At present, when people hurt each other with words, they feel the pain, because they think that all those words express a real and concrete meaning, something which is true, and you can't do anything about it ^{or they} than suffer or hurtle another word ^{against the offender} so that no should suffer too. And so it goes on, until the tears burst out, after which there might be reconciliation or deeper hatred.

Semantography can teach us, that these words have no real meaning, corresponding to a chemical entity in our world, that they are EVALUATIONS and abstractions which people make in their head, that these words are relative in meaning, vague and even meaningless.

Semantography should be taught in school for interlinguistic communication between different countries. But it should be taught too for communication in the own country, the own society, the own family.

And then, apart from inflicting misery on each other by words, we inflict misery on ourselves as a nation and on other nations. Wars are preceded by "tidal waves" of words. There are the rulers and the deputies, and their foremost activity is to speak. But then their speeches are sooner or later translated into chemical THINGS and physical ACTIONS, there comes war, there come taxes, there comes actual physical misery.

And sometimes physical misery comes first, but rulers and deputies, instead of going into ACTION to relieve the misery, go on speaking.

From this point of view you must consider the analysis of political sentences, given in the foregoing chapters, the slogans of the Nazis, the slogans of the democrats and the communists. If we let us drag into this maelstrom of words we get lost and millions of citizens get lost, ^{and} ^{others} are going to lose their lives in the controversies ahead.

Here semantography may help us to realize the vagueness of those speeches. Today the citizens listen reverently, but once semantics is taught in schools, they won't listen, and the deputies would refrain from making speeches, which would make no impression on citizens trained in semantics and semantography.

During the last weeks, when writing the foregoing chapters on politics, etc. I have often used examples presented by the newspaper or the radio on that very day. In fact, every single paper, every single speech on the radio provides ample examples of vague and ambiguous sentences.

Right now, I have stopped my typewriter, and have listened to a serial of the British Broadcasting Corporation "Four Centuries of Parliament". Today's particular broadcast bears the subtitle: Disraeli versus Gladstone. It was a highly interesting performance rendered by British actors, and one could vividly imagine the British parliament, the honourable members of parliament and the atmosphere of Victorian England. I heard parts of the most famous speeches and controversies of those two giants of the word, Disraeli and Gladstone, that their speeches sometimes lasted two, three, four hours and even more, and we know too that they were hailed as the world's greatest modern orators.

I listened attentively to their greatest speeches, and I was appalled about the profusion of adjectives and of vague EVALUATION words, which both orators used; Their bickering with each other, clothed in the finest rhetoric, and followed by roars of laughter of the party followers.

I maintain, that a nation, trained in semantics, wouldn't stand such talk. Stuart Chase said in his "Tyranny of Words" (26). And he said too, that, once you are trained in semantics, you can't stand many of the speeches of politicians, economists, business men, reformers, etc., etc., up to philosophers in general. And when we think that we ourselves, and our friends are little politician, economists, business men, reformers, and philosophers in general, you can imagine, what would happen, when semantics is taught in schools, and "gets into our bones" when we grow up. Why, a general, wholesome silence might ensue, and out of this, people who would start to say something, would think twice and thrice before saying anything. The results might well be beyond our imagination. It might change the face of the whole earth.

Now, you might say - I am going "too far". And to prove how far I am going with my semantography, you would take any sentence of this book, and dismember it with semantography. Why, in almost every sentence of mine you would find human EVALUATION words. You could dissect and make ridiculous anything I have said in this book.

Correct. But listen to Stuart Chase's introduction to his book: (26)

"I shall not tell my story very well, because it is almost as hard to investigate words with words as to lift oneself by one's boot laces.... There are the many pits into which I am bound to fall, because of the persistence and strength of language habits which are not so much mine as a common racial heritage.... Edit and revise as I may, many of the lapses will remain. But you are going to read a book, where the author is at least on the watch for failures of meaning, at least alive to the grave difficulties of communication. That is something you do not encounter every day."

To this I have to add, that I am writing this manuscript directly onto the wax stencils, and you might know, that corrections are very cumbersome, when made on wax. And then, I work now for nearly 3 years full time, and before this I worked 4 years part time on this book. I must finish it somehow, although I discover with dismay, later on, my own pitfalls.

Moreover, if I have to tell a story to people, I must use the language of the people. And as I am now 51 years of age, I can't change the habits of speech, and, if I would, and resort to the descriptive language of chemical reports, my book would not be read. Stuart Chase uses metaphors in profusion. In his book, "semantics has a front row seat" in his own words. Consequently you enjoy his book and you keep on reading. Then you learn something about semantics.

I have said in this book, that many words of our language are relative in meaning, and consequently vague. If I say the word over or under, they have no meaning, unless I state over what and under what. And I have many times stressed the possibility that we can avoid the EVALUATION words by translating them into, or referring them to, words of THINGS and ACTIONS. If a woman says to her husband, that he "is lazy", she is going to hurt him. If she says that he worked 2 hours today, she has stated a fact, in words of ACTION and TIME, and no harmful EVALUATION attached. It might be that he is overworked, tired, or actually sick. But if she says, he "is lazy", she might bring him in a rage, and he might take a knife.

And here I come to what I have termed The Moral of Semantography. We should do what we are able to do, to make our speech unambiguous. We might use human EVALUATION words, if they don't cause harm and misery. But the words harm and misery are in themselves vague. But we can translate them. Harm and misery might mean all sort of THINGS: a pillow wet by tears, shed in the night; a swollen face in the morning, burned toast, spilled coffee, smashing of the door, and breaking the glass, and sometimes even a knife and a knife, orphans, a court room, and prison bars - all these THINGS mean harm and misery.

Let us take one example, a sentence with human EVALUATION words, which does no harm. It is the title of a standing feature in that great magazine Reader's Digest.

The most unforgettable character I've met.

We could write the sentence in semantography, but we may analyse it right away. We have 2 THINGS: character and I. Both words denoting a human. The word character does not carry a human EVALUATION word, although we think sometimes that a "good human" is meant. Al Capone was a character, and La Guardia was also a character, and so was St. Francis. However, if you think, that the word character carries the EVALUATION good, we will leave it at that.

1 ACTION: to meet, having met

2 human EVALUATIONS: most and unforgettable. To forget indicates directly a mental action, a sense reaction, different in different brains. What may be unforgettable for one mind, may be easily forgotten by another mind, and no one could say that he is right and the other wrong. But even if both minds would agree that that particular character is unforgettable, they may be at variance, whether he is the most unforgettable character.

Well, I have dissected, dismembered and torn to pieces that title. So what?

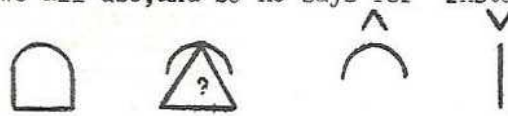
Do those articles under the title "The most unforgettable character I've met" any harm, do they cause any misery? No. Very likely, people won't come to blows, arguing if that or the other character was more unforgettable than a third character.

I hope I have made it clear, what I mean with the Moral of Semantography. From this point of view, we should examine what is said, and printed. Then we would make great discoveries, and orators and writers would have to change their mode of speech and writing, if they don't want to fall a prey to laughter, or failure at the next election.

At present, some of the deputies, the congressmen, the ministers, the diplomats, are talking and talking - and they may honestly believe that they are doing the best they can. However we want ACTION and the good THINGS of life. And semantics may be just this tool, which could end the present interminable speeches, and set the elected men to work - not to the drafting of resolutions, but of decisions: so many tons against so many tons. so many loads of cement for that irrigation dam, so many pipes, so many houses, etc. etc.

Then, are the books. Most writers honestly believe, that they are doing their best, discussing the problem with the words of their language (just as I do in this book). But once you have absorbed a bit of semantics, you can't stand many books (this no exception).

Take for instance a very important book about a painstaking work, the implications of the Negro problem in the United States. "An American Dilemma" by Gunnar Myrdal. He and his associates have investigated the problem from any angle, have interviewed thousands of people, have drawn up all kind of statistics, have discussed all aspects of this problem. This is probably the most elaborate, most thoroughgoing examination ever made. Yet, Myrdal uses the language we all use, and so he says for instance, that the American people desires



"to know the Truth and to think straight."

Now, these few words seems so full of meaning to anybody and to Myrdal, that I will be denounced, if I try to show that they are almost meaningless, or at least ambiguous.

If an outsider, who has never been in America, but only heard about the Negro problem, asks about it, he may get some information. Sure enough he wants the truth. The American people, that means most of them, are in almost daily contact with "the problem" that means with Negroes, or discussions about them. Sure enough they all want to know the Truth, the whole Truth and nothing but the Truth. But the word Truth is a meaning in our head, it's relative. We can ascertain it in some simple cases, as for instance: "The stone is on the table", but even then it could be done with mirrors.

But in a problem involving about 13 millions of people on the one side and the rest of 130 million on the other side, it may be almost impossible to ascertain that miraculous entity: Truth. It may be theoretically possible to interrogate all the men and women, boys and girls, white or black in the United States. It might be possible to investigate their heritage, their background and their thoughts. But would they all tell us, what they think "truthfully", and would they not think to-morrow differently, or answer differently when the question is put in other words? Can we ever find out the "Truth". Or can we ever ascertain how many Negroes "pass off" as whites, or how much negro blood in percent flows in the veins of the 130 million people of the United States? We can say: "in all

probability and in all practicability (whatever ^{adjectival} these nouns mean) we shall not know the Truth, the whole Truth!

But suppose we get the Truth in neatly compiled statistics and painstaking reports. Then we stumble over the other word, which carries the mind symbol: to know. One thousand different people, ^{when} reading the book, do they really know? Does not this indicate a mind reaction, which is so much different in different minds? What do you know actually, even if you have read the book? You may have forgotten half of your knowledge, when you read the last page. After a few months your knowing may be even less. When tested about what you know, you may fail miserably.

But let us even suppose that there is a real and concrete meaning in these words: "to know the Truth", what-for heavens sake- means "to think straight"? A senator of the South, a cotton planter, a gentleman still fighting the civil war, a Yankee of the North, a columnist, a Negro, a minister - they all believe that they "think straight" about this problem.

Well, you may agree that such words, which seem so meaningful, lead us nowhere, yet they are used by anybody with full conviction. I believe, that such statements might not be made, when semantics would be an item in the schools, from the kindergarten to the university. Writers and readers will think twice, when coming upon such words.

Take advertising. Some advertising agents might not realize that they are putting over meaningless statements, and even lies to the public.

There will never be a better cigarette.

I saw this on a poster yesterday. What a lie! And what a public, who, (the copy writer thought) will swallow this.

ABC Cigarettes taste better, because they are blended better.

Cigarettes are THINGS which give a sense reaction: they taste. If the copywriter would only say: ABC Cigarettes taste better, some smokers may say: "Sez you!" So they must be silenced by clear, cold logical reasoning, as to the cause and effect: ABC Cigarettes taste better, because they are blended better. "To blend" means not only to mix; it means to mix ^{even} good. This not enough, the copy writer asserted: they are mixed good and better. Well, here the individual must stop. He can investigate the taste, but he can never investigate the blending. And so, such slogans are, believed if repeated a million times.

Some advertising agents know ^{about} the critical mind of some people, and so they boldly assert:

Statistics show:

Tests have proved:

Doctors say:

We have already discussed what can be done with statistics (p.475). Tests indicate certain physical ACTIONS, but prove indicates a mind action. In other minds, the tests may prove something entirely different. Doctors are different individuals. What doctor ^{says} may be denied by doctor 2. We have discussed all this already.

Since I am in this beautiful Australia, in which the great majority of people (I would say about 80% or more) live in one family cottages, I have a garden of my own, and my wife and I potter around ^{and} buy all kinds of seeds, and seedlings. My wife studies the directions on the seed packages, and I study books on gardening. But in many cases, there is no go. What would you say to the following advices:

Radish must be grown quickly.

If the soil is good, you don't need fertilizer.

Water thoroughly, but not too much.

Use lime, but not excessively.

All this advice may mean something to the experienced gardener, but it's hopeless with a beginner, unless he asks a gardener friend, how much ^{square} per/foot soil, how many hours sprinkling, etc. etc. But then the beginner will find out, that different gardeners evaluate these ^{advice} differently, and give different advice.

Let me end these examples with a sentence which I found ^{yesterday} in a big book on French grammar. The author winds up the theme in the last paragraphs of the book, and concludes with the beautiful words

"Ce qui n'est pas clair, n'est pas francais" (Rivarol)

"This which is not clear, is not French."

Can we accept this? What does he mean by "clear" and what does he mean by "French"? Much is said and written in French, which seems to be not clear at all to some Frenchmen.

With a little training in the discipline of semantography you would find out, that most of the speeches, and of our daily talk is - should we say - "clogged" with EVALUATION words which have different meanings with different people. Hence controversy.

Well, after we have examined this "sorry" state of affairs - what can we do about it? We can do a lot. Semanticists have already provided certain safety devices, which could be taught to children. These devices work. Here are a few:

- (1) We use adjectives, and we should become aware of them. Usually we put an "is" in front. He "is lazy". This "is ridiculous". From the chapter on the "Is" (p.405) we have learned what damage the "Is" can do, and we have learned to appreciate Korzybski's saying "Whatever you say it "is" - it "is not". So, when your friends give a grand speech, and say that this and that "is" so, you may madden them with the remark: "Is it? Perhaps it "is not!"

In English we use this device, and add usually "isn't it?". We say: "This is ridiculous. Isn't it?" Well, we may ^{re-ly} "Perhaps, it isn't!" We use the ending "isn't it?" almost subconsciously. We better become conscious of this important safety device.

In German, there is an even stronger ending than in English. The Germans, add usually "nicht wahr?", which means literally "not true?" Germans say "This is ridiculous; not true?" But again, semantics is not taught in German schools. The German use this device subconsciously, not realizing, that he asserts, that his saying might actually be a lie.

- (2) From the chapter on the tricky word "have, or has" (p.412) we learned, that the verb to have can play similar tricks as the verb to be. Instead to say "he is a failure" people say "he has failed" and add "hasn't he?" You may answer "Hasn't he? May be, he hasn't?" It might work like the brakes on a motorcar.

- (3) This wonderful negation ending in the English language, can become an excellent semantic device, once we use it consciously. We use it not only with the verbs be and have; we use it with all kind of verbs, and especially with those verbs indicating the working of our senses and our mind. Quite often we are surprised to hear assertions brought forward with utter conviction:

"You do hate her, don't you?" and the answer "No, I don't."

"You did believe, didn't you?" " " " "I did nothing of the sort."

and we realize, that one person believes, that he can "read the mind" of others. The negation device "don't you?" should make us aware, (whenever we use words indicating a mind evaluation) that we can't be sure about such meanings.

- (4) Instead of the words "is", "will be", "was" and any other derivation of the verb to be we should use the words "may", "may be", "might" and "might be". Instead of saying "He is hating her", we may say "He may hate her." or "It might well be, that he hates her." This would take out the "cocksureness" of our words, and would not antagonize our opponent.
- (5) Korzybski proposes, that we should say instead of "it is", - "it appears to me", or "it seems to me" At once we would indicate that we use our imperfect senses and evaluations and might make errors.
- (6) Instead of antagonizing the whole party, by bold assertions (of which we know, that other people don't share them) we might say:

"In my opinion, I would say...."

"In my humble opinion, I might venture to say..."

"In my opinion, which is of no importance whatsoever, ,,"

"I might say - with all reservations, of course - that..."

"Without asserting or believing, that I am right, I might say..."

and other phrases like these.

- (7) We may insert the words "so-called" before EVALUATION words.

"He uses the so-called "straight thinking"

- (8) We may employ the quotation marks. "" , as in "straight thinking". We can do this of course only in writing. Followers of Korzybski lift two fingers of each hand, thus forming two visual quotation marks " " when using such EVALUATION words.

- (9) We may directly refer to semantics by saying

"He did, what we may term "straight thinking" (whatever that means) or (whatever that might mean)

- (10) We may use a liberal sprinkling of such words as "possible", "probable", "perhaps" "who knows?", "I guess"

- (11) Whenever we use EVALUATION words, and where^{ev} we even apply the above safety devices in addition, we should explain what we mean, by giving an example, containing the ACTIONS of real THINGS.

(12) If we keep in mind, whenever we speak, write or think, that we are only human beings with imperfect senses, and that our listeners, friends, and other people, might and do think differently, it will give us that precious "tolerance" towards the assertions of others, and would help us, towards a new attitude in our saying and thinking.

We might say, that language is one "thing", and thinking is quite a different "thing", and they should not be mixed up. However the scientists in this field have now come to the opinion, that these are two aspects of the same "thing", inseparable. No language without thought and no thought without language. In using language devices, such as the ones listed above (in spite of their insignificance "isn't it?", "probable" etc.) we are actually influencing our thoughts and in turn our actions in life.

Let me end this chapter with the ending paragraph of M.M. Lewis' book "Language in Society" (106)

"The Behaviourists as critics of psychology, the logical Positivists as critics of logic and metaphysics, have today revived Mueller's doctrine. In its cruder form it becomes the dogma that "thought is language"; but many who are unable to accept this, will go so far as to admit that many of the apparent problems of the nature of thought are no more than problems of language. They will agree that logic and metaphysics and even mathematics are in essence social structures and fundamentally linguistic in nature. The study of language is now a prominent feature in many fields of thought which hitherto have been hardly aware that it held any significance for them. And more and more it becomes clear that if in order to understand thought and the products of thought we must study language, and in order to understand language we must study its working in society."

And I may add, that language has been given us in order that we might co-operate with each other in society. At present, we use language to disrupt society. Our words are missiles which sometimes do harm. Any tool which helps us to recognize such usage of words, should be welcome, and semantography is such a tool (or let me hastily add) might be such a tool; perhaps, who knows, may be, if ... enough people would stand up and say: "Let's put semantography into action. Let's try it out. Let's have some experimental classes."

G O O D A N D E V I L

"And the LORD God took the man and put him into the garden of Eden to dress and to keep it.

And the LORD God commanded the man, saying, Of every tree of the garden thou mayest freely eat:

But of the tree of the knowledge of good and evil, thou shalt not eat of it: for in the day that thou eatest thereof thou shalt surely die."

Genesis, 2, 15-17

In a later chapter, on the Origin of Man and Language, I shall briefly mention an important book by Prof. Richard Albert Wilson "The Miraculous Birth of Language" (53) Wilson asserts that man is not the product of slow evolution in the decisive stage from ape to man. At a certain date in the history of the earth, something momentous must have happened - a barrier was crossed. Man emerged, conscious of space and time, capable of speech and thought. Behind that barrier the animal, including the ape, still dwells. How this all happened - we don't know, but Prof. Wilson makes it very convincing, that there is no slow evolution on this stage. It might well be, that we shall seek in vain for the "missing link", the bones, which scientists assert must be found to prove the slow transition from ape to man. The fact, that we have not found them yet, may speak for Wilson's theory.

I have tried to speculate, from the view point of the chemist, what may have happened in that dim historical time, millions of years back. A chemical change in the atmosphere, an outburst of cosmic rays, which enveloped the earth - we don't know. (s.p. 17 and later chapter) But it happened - man emerged, distinct and different from the ape.

We know, that many biologist, ^{are}despaired about the fact, that all our theories about evolution, selection, heredity, chromosomes, genes, etc. etc. do not give a single hint, about the WHY?, the purpose, we see at work in this universe of ours. These biologists, rationally

thinking men, devoid of superstition, say that the only explanation^{so far} brought forward is the story of the Bible: Creation.

Prof. Wilson says "the stories of the Bible are rejected by the man of twenty, but re-accepted by the philosopher of forty with some surprise at the amount of factual truth contained in it." In his opinion, the emergence of man, at a separate stage,^{and distinct} apart from the earlier appearance of animal as recorded in the Bible, must have happened.

We know, that most of the stories which we find in the Bible are accounts of events which have actually happened. These accounts have guided the archeologists in their research in Egypt, Mesopotamia, Palestine, and elsewhere, and have been found to be amazingly true. The story of the deluge - the geologists tell us that it actually happened.

In my studies of the oldest picture writing of man, I came upon the incredible fact, that those cave drawings going back up to 50,000 years do not contain any picture showing man raising^{an} arm against other members of his species. Only at a very late stage - perhaps 15,000 years ago, that paradisaical stage was broken - man started to kill man. There seems to be a big gap in the records. My intention is to write a short history of the emergence of writing from the earliest cave drawings, to show this gap. Again something momentous must have happened, when man was (allegorically) "driven out of the paradise". The Bible starts with factual accounts going back about 6000 years. It may well be that some dim recollection of that^{previous} paradisaical time, and its ending, lingered on in the minds of later generations, and that the Hebrew writer has chosen the allegory of man's fall, to tell of that momentous event, when man's mind became perverted.

Before that time, Adam gave names to all cattle, and to the fowl of the air, and to every beast of the field, . . . and whatsoever Adam called every living creature, that was the name thereof." We have here an account of the emergence of language, bestowed miraculously upon man. And it was a descriptive language, such as scientists try to use nowadays. And then something happened - a catastrophe.

The Hebrew historian says that man disobeyed God's command: "of the tree of the knowledge of good and evil, thou shalt not eat of it: for in the day thou eatest thereof thou shalt die." But Adam did eat - and his mind began to distinguish between good and evil. This was the end of the paradise and the beginning of man's misery on earth. He died a thousand deaths and from his own hands - man killed man - war began.

I have cited a few^{some} quotations in my summary on page 17 and shall cite more in a coming chapter, to prove that archeologists and scientists came to a similar story. By studying the excavations and remains, they found evidence, that war among the species, including cannibalism, was absent in the old stone age (paleolithic), but is found in the neolithic age, which means the time about 10,000 to 20,000 years back.

We shall contemplate this exciting evidence together with the opinion of a prominent psychiatrist Dr. G. B. Chisholm, who maintain that we can remove the causes of war by a re-orientation of man's mind, which has been perverted "some time ago".

In any case, anyone who has studied a bit of history knows, that many wars have been fought, because of that differentiation into "good" and "evil". We do not need to lay stress on the wars fought for "religious reasons", the wars against the "evil" heathens, the "evil" dissenters, the "evil" infidels, the "evil" believers of "evil" creeds. Any war was fought for a "good" cause and to destroy the "evil" designs of others. But there are the little wars, fought in the villages and the communities. Everywhere certain people detect "evil". We have burned innocent people, we have driven innocent men and women into despair and destruction, because we thought of them as "evil" and of ourselves as "good". And this still goes on in every village, where bony fingers point out the evil.

Yes, there seems to be much truth, in the narration of the Hebrew writer. Man started to judge between "good" and "evil" - against the command of the Creator. He was driven out from the paradise to^{live and} die in misery from his own hands.

As said in a foregoing chapter, the misery caused by nature, floods, earthquakes, tidal waves, hurricanes are rare - but the misery caused by man's judging of anything to be "good" or "evil" - this misery caused by the action of man's mind is daily and hourly with us and spoils almost every hour of our lives.

In foregoing chapters I have shown, how disastrous^y the minds of some grammarians and some philosophers worked. They created the adjectival noun, and thus exaggerated the meaning of the adjective beyond measure. The word "bad" is insignificant in its meaning against the ominous "Badness". And the disaster has been further aggravated by calling this noun a "substantive". In the time before experimental science, when all science was reasoned out by words alone, "Badness" and "Evil" became substances, as real as the stone, and the water. They were put on scales and weighted, and people were burned, quartered, hanged, tortured by the thousands and by the tens of thousands.

If we need any proof, that the meanings of "good" and "evil" are vague and relative, we should read what Heinrich Himmler, the inventor of the extermination camps, the murderer of innumerable hostages, the exterminator of millions of innocent men, women and children had to say: "We National Socialist want good, not evil. And Adolf Hitler leads us in those aspirations. I always wanted to do what was right." (99)

The reader is asked kindly to peruse the pages, which follow this quotation (p. 450ff) There a lengthy explanation of the symbols for right and wrong, good and evil is given.

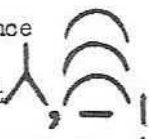
I am very anxious to have the understanding of the religious reader and of the man of the church. In the next chapter, I shall try to show, that we can find yardsticks to measure these EVALUATIONS, just as we found yardsticks to measure the meanings of long and short. But before I do this, I ask the reader, who has not followed this book, chapter by chapter, to read first those paragraphs which deal with the symbols for good and evil. I want to convince ^{you} or at least to have your understanding, that we must consider these meanings as vague, relative, and differently evaluated in different minds.

Here is a list of the foregoing chapters in question:

Man, the Classifier.....	page 127
Human Evaluation.....	" 128
Thought.....	" 161
What is Thought?.....	" 162
Id, Ego, Superego.....	" 164
The Symbol for the Id.....	" 171
The Symbol for the Ego.....	" 178
The Relativity of Mind.....	" 180
Leibnitz's Dream.....	" 180
The big Brother of the Adjective.....	" 196
Semantography for the Fighters of Death and Disease.....	" 401
That tricky Word "Is".....	" 405
That tricky Word "Has".....	" 412
Relativity in Language.....	" 204
The Ravages of Language.....	" 450
The Truth or a Lie, or "How do you know?".....	" 474
The Citizen's Rights.....	" 497
Religion.....	" 527 ff

I shall now try to prove, that the majority of the words we use, contain that human EVALUATION good or bad. Not only those words, which directly refer to a human EVALUATION. We use words, which look harmless enough, but we evaluate and judge each time we use them.

conscience
reason
instinct



MAN, BAD

(judged negative)
also termed:
wrongdoer, evil-
doer, sinner, trans-
gressor, profligate,
scapegallows
libertine, debauchee,
wanton, ras-

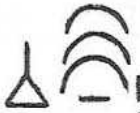
cal, reprobate, scoundrel, villain, knave, hound, cur, rogue, blackguard, vagabond, miscreant, caiff, wretch, shyster, trickster, sneak, snitch, snitcher, squealer, traitor, swindler, sharper, crook, hellhound, hellion, monster, devil, demon, devil incarnate, fallen angel, lost sheep, black sheep, castaway, ruffian, rowdy, rough, rough-neck, thug, apache, hangster, tough, hoodlum, hooligan, criminal, malefactor, malfasant, feon, scamp, scapegrace, ne'er-do-well, rotter, good-for-nothing etc. etc. (you will find a lot more names in Roget's Thesaurus (67) under the heading BAD MAN, from where the above list has been taken.)

Now you may say, that these titles have been allotted to men who have committed some crime, punishable by law, and have been actually convicted. This might be the case. But we know from every day experience, that such titles are allotted daily to quite innocent people, simply because we don't like them, for instance the boss, or the neighbour, or the

police man, or the grocer, or the foreman, or anybody, whose looks we just don't like.

On the other hand, who are we to judge others. A prominent magazine conducted years ago an interesting quiz. A long list contained many questions "Have you done this?" and the reader was asked to take a paper and a pencil and jot down, how many times he did this and that, and under what circumstances. Then he was asked to look up another list and add up figures. The total was the amount of years which he would have to spend in jail. I assure you, offences of tax evasion, breach of promise, seduction, and small thefts were the minor offences. Lucky enough for most people, they are not "found out".

Similar reflections are appropriate if we consider the synonyms for BAD WOMAN: Jezebel, hell-cat, hellhag, witch, hag, harridan, strumpet, jade, drab, trull, trollop, harlot, wanton, Cyprian, adulteress, courtesan, procuress, bawd, Delilah, Messalina, hussy, minx, libertine, voluptuary, rake, debauchee, roué, wanton, demimondaine, cocotte, pick-up, wren, chippy, streetwalker, woman of the town, woman of easy virtue, fille de joie, demirep, Thais, Phryne, Aspasia, Lais, mistress, paramour, hetaera, concubine, doxy, leman, etc. etc. etc. (67)



WOMAN, BAD
judged
negatively

You may rest assured, that the compiler of Roget's Thesaurus was only hampered by considerations regarding confiscation, to add some hundred names more to the list.

Well, we know under what circumstances the woman has been made guilty. How much the seducer is to be blamed, and how much the keepers of our society. And who will throw the first stone?

But the tragedy goes deeper. Women, who have been beaten down by our "laws of society", women who are sunk to a low level, don't care if you give them such names. These invectives simply don't hurt human beings, who have been hurt a thousand times. But the case lies similarly as with invectives against men. Those names are given to girls and young women, who like to dance, and to flirt, to laugh and to be happy. Then comes the misery, and with it misery, tears, unhappiness, and worse. We are simply unable to fathom the misery which is inflicted right now in innumerable villages and towns all around the globe, and the misery inflicted yesterday, and a year ago, and throughout all the foregoing generations.

Yes, the Creator forbade Adam to "know" between good and evil, and when Adam disobeyed the command of the Creator, he was driven out from the paradise into the misery which he inflicts daily on his fellow men, a misery of his own making. It can be understood, that the male human laid the blame at the woman Eve. Men control and rule this world. Men are responsible for the laws of society. Men are responsible for the ^{man-made} misery of our world.

And now, just try to think for a moment of the last election or other foregoing elections. We need honest, courageous, rationally thinking men to be our aldermen in the council, deputies in congress and parliament, rulers of communities. At every election such men, honoured by all who know them, are dragged out from their small circle, and persuaded to stand for election. If they give in, they are in for the shock of their life. They, who have done no harm, who ^{believe to} have been a good father, a good husband, a good employer, a good citizen, are simply showered with invectives of which crook, rascal, scoundrel, rogue, are the tame ones. In disgust these men withdraw, and the field is left in many cases to those hard boiled men, who are not more hurt by such names, because they heard them all their lives. The result is in most cases, corruption, or at best inefficiency. Then the citizen cry that the country is going to the dogs. The whole world goes to the dogs.

And all this - just because of that disastrous quality or cell-reactions within our brain, all it instinct, or conscience, or whatever name you prefer, which drives us on to be judges between good and evil, and which we do against God's own command.

Throughout the seven years, during which I worked at this system of semantography, I was worried about the reaction of religious readers and men of the church. What would they say to my treatment of good and evil as relative meanings, indicated by the mathematical + or - sign, in connection with the symbol of the mind. This treatment made the meanings relative and vague. In the beginning I did, what a minister would have done. I added to the symbol for good and evil, the symbol for the Creator. But then I found, that no blasphemy would be greater. No! Man's mind must be shown in the symbol as being responsible for the horrible crimes committed.

Then I pondered about the symbol for the meaning for Tolerance. And then a flash went through my mind, when I remembered that I as an engineer, have marked tolerance, as all engineers do, by putting the + and - sign together, thus \mp . Nothing could prove for me more, that I am on the track of an appropriate symbol, than this discovery.



Tolerance
(see p.179)

Then I remembered Hendrick Willem van Loon's definition of Tolerance, as to^{be} that acting of the mind, when you are not sure whether you are right or wrong, when you think that in thinking to be right, you think too, that you^{may} be wrong. Exactly this is symbolized by the engineers tolerance, when he orders a steel shaft, and is ready to be tolerant to a certain extent. He wants ¹⁰⁰⁰ steel shafts with a diameter of exactly 25mm. But he knows, that each shaft will be just a little different. So, he defines his tolerance to go to ± 0.01 mm. We too can exert tolerance, and can even define it similarly. Tolerance means here our adaptability to the circumstances, and to compromise.

And now let us listen to Dr. Chisholm's words. At the time of his lecture, he was Deputy Minister of Health, Department of National Health and Welfare, Canada. He said in his William Alanson White Memorial lecture "The Psychiatry of enduring Peace and social Progress" given in 1945 in Washington

"A mature person... has the quality of adaptability and compromise. Were you and I brought up in that direction? No; we were taught to be absolutely loyal and obedient to the local concept of virtue whatever that happened to be. We were taught that Moslems or Hindus or Jews, or Democrats or Republicans (with us in Canada, Grits and Tories) or capitalists or trade unionists or socialists or communists, or Roman Catholics or Methodists or any of all other human groups are wrong or even wicked. It almost always happened that among all the people in the world only our own parents, and perhaps a few people they selected were right about everything. We could refuse to accept their rightness only at the price of a load of guilt and fear, and peril to our immortal souls. This training has been practically universal in the human race. Variations in content have had almost no importance.

"The mature person is flexible, can defer to time, persons and circumstances. He can show tolerance, he can be patient, and above all he has the quality of adaptability and compromise" say Strecker and Appel. Is family or school or church teaching in that direction? Almost never, and yet it is surely true that helping their children to reach this state of maturity successfully is the first responsibility of each generation."

Dr. Chisholm places the task on the shoulders of the psychiatrists and the teachers:

"Psychiatrists everywhere have spent their lives trying more and more successfully with a variety of methods, to help individuals who are in trouble to approach near enough this state of maturity... but surely it would be more advantageous to the world for psychiatrists to go into the preventive field where the big jobs needs to be done. The training of children is making a thousand neurotics for every one that psychiatrists can hope to help with psychotherapy. To produce a generation of mature citizens is the biggest and most necessary job any country could undertake and the reward in saving of misery and suffering would be colossal.

We are the horrible examples. We are the people who fight wars every fifteen or twenty years. We must at whatever cost prevent our children and their children from being as we have been."

Dr. Chisholm lectures have provoked great controversy in the United States and in Canada. Our training in semantography will give us the clue, that the differences in opinion raged about those words in his talks, which are evaluated differently in meaning by different people. But what no one could deny were the miseries inflicted by the wars, and by our treatment of people, judging them in a wholesale manner good or bad.

Dr. Chisholm outlines a great plan, in which thousands of psychologists and teachers and church men should take part. And he recognizes the importance of ^{the} "simple speaking" of a simple language. He is very well aware of the "scientific slang" which psychologists use in their books and in their talks. And he says:

"What the world needs from psychiatry is honest, simple and clear thinking, talking and writing. It needs the same from psychology, sociology, economics, and politics. Clear and honest thinking can almost always be expressed in simple words which are understandable by the people, who matter in a democracy. The people who matter are the teachers, the young mothers and fathers, the parent-teacher associations, youth groups, service clubs, schools and colleges, the churches and Sunday-schools - everyone who can be reached and given help toward intellectual freedom and honesty for themselves and for the children whose future depends on them. Can we psychiatrists give up our protective device of hiding behind a specific, difficult and variable vocabulary to avoid our obvious responsibilities? ...

"...the sciences of living, should be made available to all the people by being taught to all children in primary and secondary school...

Only so, I think, can we help our children to carry the responsibilities as world citizens as we have not been able to do. Only so can we prevent their having to live in a world of fear and chaos and cruelty and death, far more horrible than we know."

I shall quote more from Dr. Chisholm's lectures in the final chapter, esp. those references to the practical scheme to be set up.

Here I wish to say, that I believe, that semantography could be that medium, which would help in the teaching Dr. Chisholm advocates. Not only are relative meanings clearly indicated even to young children; all those synonyms of bad men and bad women resolve themselves into one single compound symbol.

And then there is the first advantage of semantography. I know from own personal experience, that in Dr. Chisholm's own country Canada, there are large groups of people for instance Ukrainians, to whom English is a very foreign tongue. I have listened to them in the market places in Central Canada. And I had great difficulty to make myself understood in Quebec, unless I used French. Semantography symbols are the same for any language. And therefore I propose ^{as an additional help} semantography for that re-education.

I am sure, that men of the church and religious readers will not misunderstand my intentions, and I hope to convince them even more in the later chapters. Every minister and every teacher who tries to help a human being, has to use psychology and those methods which modern psychiatrists have evolved in painful research. Today psycho-analysts send some patients to churchmen, and some ministers advocate psycho-analysis for some people.



PLANT, BAD
a weed

And now let me show you that our urge to classify everything into good and evil is not confined to judgement upon members of the human race only.

A year ago, a great tree slaughter started here in Sydney. There is the most stately tree of the Australian landscape, the Moreton Bay fig tree. It spreads enormously, and is a beautiful sight. I should know, because since my boyhood, I was never tired to photograph trees of all kinds, and I was deeply moved, when I read once in a book of a man, who believed that these wonderful and courageous creatures - when felled, come into the tree heaven.

Others seemed to feel like me, and when this cutting down of Moreton Bay fig trees started in some Sydney avenues, letters poured into the newspaper offices, and were printed daily in the column "Letters to the Editor". But the felling continued - and the letters did not cease. In the end, the supervisor of Sydneys public parks, the chief gardener sat down to write a letter to the editor, and there he frankly said, that the Moreton Bay fig tree is a weed.



TREE, BAD
rationally judged

This word threw Sydney tree lovers into a rage, and they protested more violently than before. Well, what is in that term weed, which caused so much controversy? For the person trained in semantography, the solution is simple. A weed is a plant, be it a flower or a tree, or a grass, which is considered by somebody as just no good. To draw up the symbol for weed, we have to add, behind the symbol for plant, or tree, the symbol for the mind who judges this plant or tree in the negative, minus, just not good. Why then did Sydney's chief gardener attach a MINUS to this tree, whereas the letter writers attached a PLUS to it. It turned out that Sydney's tree lovers added up the PLUS of the beautiful sight, the greenness, the shade, etc. whereas the gardener considered the MINUS, the fallen-off leaves which had to be collected and carried off constantly, and this means labour, and a big minus in the budget of the chief gardener. True enough, this great and colossal tree sheds constantly heavy leaves, about 7 tons ^{large} per tree a year. For the chief gardener, the Moreton Bay fig tree was a weed, something not good, something to be weeded out.

But we can find judgement in words, where there is no indication of such. Take for instance the exclamation: "What a man!" "What a character!" Well, what is meant? A mass killer, like Jack the ripper, or Al Capone, or somebody, highly revered by his fellow men. Most of our words, carry a judgement as to good or not good. Take these

Hawker Canvasser Salesman Business Representative

In semantography all four terms will be symbolized by man, and business, and we may add the symbol for travel. But in ordinary speech they carry an evaluation, the one is despised, the other highly respectable. But it may well be, that the Business Representative is a bad man. But what is "bad"? Can we find a yardstick to measure it..

THE UNITS OF ETHICS

"The laws of Nature, judged by the glimpses we have of them, are more miraculous than the wildest tales in the "Arabian nights". To look at the sky on a starry night, to realize that every star is silently wheeling in its appointed course, is to know that we live in the presence of a perpetual miracle."

Walter Murdoch (21)

"I can see how it might be possible for a man to look down upon earth and be an atheist, but I cannot conceive how he could look up into the heavens and say there is no God."

Abraham Lincoln

The modern theory of relativity has turned our concepts on physics upside down, and has also created a linguistic upheaval. Einstein has almost swept away the firm ground on which we stand. No fixed point in the universe, no fixed time interval. We can't trust our yardsticks and we can't trust our clocks. Relativity everywhere. All we observe and all we measure may be at variance with some other observation and measurements. The only thing we can do is to cling to some system of reference, and realize that there are as many systems of reference as there are observers.

After showing us that all our observations and measurements have no absolute meaning, Einstein started to develop formulae of the laws of nature, which might be valid and invariant for different observers and different systems of reference. These new formulae contain some "constants" of the universe, which are invariant, which are the same for different systems of reference. Such a world constant is for instance the speed of light. The reader may kindly peruse the chapters p. 144 ff and p. 200 ff, where I tried to give some explanation of the theory of relativity and its implications in regard of language.

The physicist tries to explain the happenings in this universe in mathematical language and then tries to explain them in ordinary language. There must be therefore a structural relation between both languages. The logicians, especially Bertrand Russell and others have applied mathematical reasoning to the statements we make in ordinary language. On p. 491 we have seen how the propositional function can be applied to controversial subjects like Democracy and others.

In foregoing chapters we have learned that the meanings "long" and "short" are different for different observers. To make these meanings disappear, we have applied a yardstick, which expresses the same meaning for different observers. In other words, we have shifted the system of reference from the two observers to the yardstick. Disagreement between the two observers must disappear - provided the marks on the yardsticks are not varied. On the market places of the world, we have millions of different observers, all operating yardsticks to avoid disagreement, and the market inspectors go out every day, and check yardsticks to see that they are not at variance, that all show the same unit of length.

However, in different countries, different yardsticks are in use. There is the story, that a king had his foot measured, and decreed that this should be the unit with which his subjects might come to an agreement about "long" and "short". However, the king's foot varied in length at different times, and his councillors knowing this, had the measured length engraved on a stone in the market place. But again, the stone crumbled away.

In other countries, the "foot" was applied too, but it was of different length. Agreement was difficult to reach. It had to be a revolution, to find a more stable system of reference. In 1794 the French National Assembly decreed that henceforth a new unit should be established. The earth itself should furnish this unit, and it should be the 10,000,000th part of a quarter of an earth meridian, measured from the pole to the equator. This unit was then called a meter from the Greek word metron, a measure.

However, different measurements of the earth curvature, gave slightly different results with different observers, and so, it was agreed to have the meter unit engraved on a bar of a certain platinum-iridium alloy (supposed to vary little in length under different temperatures) and the two marks on this rod of special shape, must be measured, when the temperature of the rod is exactly 0° C - not an easy procedure, because temperature measurement depends on a man-made thermometer, and the freezing point of water depends again on atmospheric pressure, on impurities in the water, etc. etc.

No wonder, that the equivalent of that meter unit, deposited in Paris, has been found in Great Britain first to be 39.370113 imperial inch, then, according to recent measurements 39.370147 imperial inch. In the United States the equivalent has been accepted as 39.37 inch.

Now, we will all agree that what we need is a unit for "practical purposes". Simple, as these two words look, we are trained in semantography, and know that here the trouble starts. The word "practical" carries the EVALUATION indicator, and "purpose" shows the relation symbol and the mind symbol. Consequently, the meaning "practical purposes" will be different for different people. The merchant and the craftsman might be easily satisfied with a wooden stick for their practical purposes. The surveyor has different practical purposes and is difficult to satisfy, and the physicist who tries to measure the spaces within the atom, is not at all satisfied with the meter, and so he searched for a more constant unit. He believes to have found it in the depth of the atom and he took a certain line in the spectrum of the metal Cadmium as a unit of length.

However, the message which we received from the dwarf companion star of Sirius has shown that even this unit varies slightly with the weight and density of the celestial body, from which it is taken.

We should admire this miraculous striving for greater and greater accuracy, performed by a miraculous conglomeration of cells, forming the human mind. Man, of all the creatures of this earth has been given the power to penetrate the infathomable spaces of the universe to find better and still better units, more and more accurate, more and more helpful for agreement between different observers.

Now we have witnessed the fact, that man throughout the ages, and even in our times had and has different conceptions about what is good and what is bad, what is right and what is wrong and evil. Somewhere, in the depth of our mind, we feel, that good and evil have some definite values, which could be measured in units on which different observers could agree. To find these units, and to find agreement, it would be wise to follow the method which scientists have employed. If modern mathematicians behold in wonder, the mathematical simplicity which they find in the depths of the universe and in the depths of the atom, and say, that the Creator, or creative force, which brought this universe into being is a mathematician (so to speak) then we may hope that the mysterious working of our brain cells is going on along with a similar simplicity to that, which reigns among the stars, the chromosomes and the atoms.

The first step according to modern scientific methods, is to realize that somehow, our conceptions about good and evil are relative and therefore, different observers will get different measurements. After this, we may try to find formulae which are invariant for different observers, be they Protestants, Roman-Catholics, Moslems, Buddhists, Jews, Shintoists, and Atheists or other believers in some kind of ethics.

The second step will be to try to use the same kind of reasoning as applied to mathematical formulae. We have been able to write down the laws of nature in mathematical formulae. What we have to do is to find out whether the laws of ethics can be written in a similar way. The laws, which govern the harmony of the stars, or the harmony of the chromosomes, can be written down in mathematical formulae. The laws, which govern the harmony of human beings within human communities, are too laws of nature. The very fact, that our brain cells have miraculously formed the conception of this harmony, is proof to the fact, that such harmony is part of the universe, that such conceptions may have been generated in beings on other celestial bodies, and that other celestial bodies may be far advanced in this harmony - or far behind -, just as our little planet was, many millions of years back, when only amoebae sailed the great waters which covered the earth. Many million of years passed, until primitive man made his appearance, and again million of years passed before Jesus, and Moses, Gautama and Pythagoras, St. Francis and Spinoza, Newton and Einstein made their appearance. And as the thousands of years passed, the language of man became more and more accurate, more and more truer to the actual happenings in nature. The language of science (Greek mathēma, that which is learned, science; Sanscrit medhā, intelligence, wisdom, and in English mind) mathematics, has enabled man to fathom the deep seas, to measure the universe, and to weigh the stars, and to find agreement, not only between scientists and engineers, but also between grocers and housewives. Why should we not be able to write down the laws of ethics in some sort of a mathematical formula and then find some units of ethics, in which the plus sign indicates some units of good, and the minus sign indicates units of minus good, the absence of good, or even the reverse. If a man commits during a day 5 good deeds and 2 not good deeds, why shouldn't he get 3 good deeds on his credit side - if the deeds contain somehow the same amount of units of ethics.

Now, all this may seem utterly ridiculous to many readers, especially to those who see no connection or similarity between the interactions of the stars and electrons to the interactions of the humans and the nations. Those readers, who believe that the lofty science of mathematics can never be used for such considerations as the ones above, may consider the following paragraphs.

Unfortunately, I am not a mathematician, and therefore whatever my arguments, they will be very crudely represented. I am completely ignorant of all those theories about the foundations of mathematics, about the theories of numbers, but I guess that the language of mathematics, being a human activity, is subjected to all those limitations, to which the human mind and its workings are subjected.

Those who believe that mathematical formulae represent 100% truth, are in for a shock. When we divide $4 \div 2 = 2$ this statement may represent truth in a human's mind. Other simple divisions, however, will give a number, which we will never be able to write down truthfully. The result may be 2.000046382957463895847..., a row of decimals, stretching from the earth to the sun and further on to the ends of our universe.

The above consideration applies to abstract mathematical formulae. Now we come to the mathematical formulae, which cover happenings in our physical world. Here we should know, and every scientist will tell us, that these formulae never tell the whole truth, but only an approximate truth, and only valid within narrow limits. As Bertrand Russell remarked, a mathematical formula, when overstrained, begins to talk nonsense. Every boy and girl learn in high school the formula of Robert Boyle

$$\frac{V_1}{V_2} = \frac{P_2}{P_1}$$

It says, that, when you compress a gas to half its volume, the pressure within the gas will be doubled. But you must make a lot of assumptions, which are not expressed in the formula. You must assume that the temperature remains the same, which it doesn't, and you must assume that the gas remains a gas, which it doesn't. When you overstrain the pressure the gas liquifies at certain temperatures.

Every electrician must know how to handle the formula

$$A = \frac{V}{\Omega}$$

It says, that when you increase the voltage, the electric current, expressed in Amperes will increase, provided the resistance of your wire, measured in Ohm (Ω) remains the same. But electricians know, that they cannot trust very much this formula. When the current increases, the wire will become hot, and then its resistance will increase, and with this the current will decrease, and if the voltage is increased, the wire will melt, or the current will not go through the wire, but through the adjoining air - all this is not expressed in the formula, and if you don't know this, you can make deductions from the above formula which will turn out utter lies.

Now we are coming to a very important conclusion. Look at the above formulae. Both formulae contain a V letter. But this is not meant to represent a sound, but something quite different. The meaning of the V in the first formula is a Volume in space, and in the second formula the V means Voltage, the tension of the electromagnetic force. You see, the handling of a mathematical formula, depends foremost on what you and I mean by these symbols. In other words: the semantics of the formula, the meaning of the symbols. If you think that the V symbol in both the above formulae means the same thing, then your calculations will result in utter nonsense. If you assume that V means Volume, then you are entitled to a reasoning and a transforming of the formula, applicable to volumes. If you assume that the V means Voltage, then quite different considerations and quite different handlings of the formula must result. And your reasoning and your formulae must follow actual nature.

We have agreed that the following symbols shall stand for the following things:

- | | | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| chemical THING
in general | stone | animal
quadruped | male
human | brain
of human |

Having made these assumptions we are entitled to write



man feels, thinks

but we are not entitled to write



chemical matter feels, thinks

because the brain symbol stands only for the conglomeration of cells beneath a human skull, which medical men term the brain. Modern science has uncovered the miraculous fact, that the cells within a human body (or any living matter) act as if they would think and

know exactly what to do in any emergency. If we cut a living plant, or a tree, or a jelly-fish or a lizard or if we cut ourselves on the finger, the molecules and their communities, the single cells, reveal a "presence of mind" an "abundance of wisdom" and a "skill and knowledge" which seem to be one of the greatest miracles of Creation. They immediately send special mobile cells to the place of the disaster - or these mobile cells go by themselves (Heaven knows how they get the message). In the meantime new chemicals are produced by other cells, and the healthy cells around the cut, clear up the debris and start to build afresh new cells, new tissue, new bones, new hair, new shell, new bark, and all this is done apparently without a brain, which we cannot find in amoebae, flowers or other living creatures of low order. These amazing purposeful processes go on, even in a complete cretin, a human, devoid of any normal function of his brain. We see birds traversing thousands of miles and coming back to the same spot, we see animals doing things, which no one ever showed them how to do it (including their own parents) and we must realize that their molecules in their cells do all these things - how? - Heaven only knows. People, who discarded the idea of a Creation full of purpose, and a Creator, and who feel very uncomfortable about all these miracles, invent a word which explains everything, so they think. If you ask them for an explanation of all these miracles, they will open their mouth and say, just one word: "Instinct" - and this word, of course, explains everything. I propose another word for "Instinct"; a synonym. Here it is: "We havenottheslightestidea."

But - believe it or not - we must extend a similar consideration to the approved mathematical formulae in physics and other sciences. We write down V and agree that it should mean Volume. But what does Volume mean? Oh, that means Space. And what means Space? Oh, that's what we understand by Volume. And so we explain one word by another word. Voltage refers to a state of Electricity. What's this? Electricity is Electrons, in motion or static. And what are Electrons? They are the units of Electricity. A nice circle. What means g in the formulae? Oh, this means Gravity. And what means Gravity? That's what make stones fall. And why do stones fall? Well, because of Gravity. Well, what is Gravity? Gravity is... Gravity is... We havenottheslightestidea. The words "curved space" don't explain it either.

So we allot a symbol g for something which we cannot explain. In other formulae of physics and chemistry the same symbol g stands for gram, or gas or dry saturated gas at saturation pressure and temperature, or vapor in contact with liquid, or unit conductance or some other meanings (see Webster, 28). But let us not lose sight of the fact, that the above underlined words like gas, pressure, temperature, etc. represent in themselves symbols for phenomena, which we have not yet explained to ourselves. We allotted them a name, just like instinct.

This is the way how scientists work. They observe Nature, and allot a symbol for each phenomenon. Then they try to discover the relations between these phenomena, and try to write these relations down in some sort of formula. Then they try to make predictions on the basis of such formulae. "If you do this, that will happen". Then they find that the formula will work in very limited circumstances, and when we assume only special conditions.

From this point of view should the following formulae and transformations be considered. No matter, how ridiculous the coming paragraphs may appear to some readers, the formulae are written down in a similar way as the formulae in physics and chemistry: to say something which occurs in nature. At the end of this chapter, we shall learn that semantography offers science another advantage, on which we have not yet fully touched in this book, and this refers directly to mathematical formulae.

On page 382 in the chapter on Physics, you have found the symbol for



force

Readers, who are not trained in physics, may have been puzzled by this picture. For the others, it might have been self-explanatory. The compound symbol indicates one of the most fundamental laws in the universe, the law of interaction as formulated by one of the greatest thinkers of all times Isaac Newton. In ordinary language:

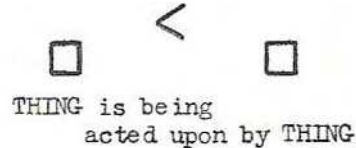
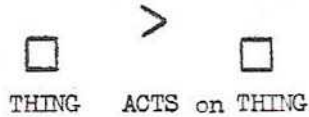
"For every force in nature there must be two bodies, one to exert the force and one to receive it. For every action (or force) there is an equal and opposite reaction."

From the foregoing pages we know that the phonetic symbol compounds f-o-r-c-e and a-c-t-i-o-n are symbols only, which do not explain anything. Neither do the symbols in the formulae F for Force, E for Energy, etc. And neither do the semantography symbols explain anything. The words and the letters and the above symbols try to depict the relations between phenomena in nature.

How do we arrive at this compound formula for force?
We start with the "natural" sentence, which, according to Prof. Fenollosa (31) must "correspond to some primary law of nature".



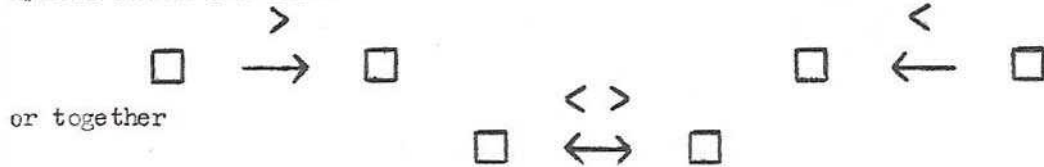
In this formula we assume that the ACTION goes from left to right. To indicate the direction of the ACTION, we may use the indicator turned sidewise and we thus arrive at the transitive active or passive indicator.



Observing nature and realising that every ACTION of one THING on another THING is accompanied by a reverse RE-ACTION, we can write both sentences above together.



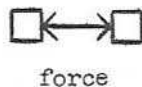
Now we have another symbol to indicate an ACTION in a certain direction: the arrow symbol and we can write



In this formula, ACTION and the direction of it, is expressed twice by two different symbols. So we can omit the indicators and write

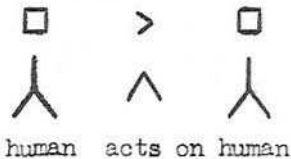
The Law of Interaction  ↔  formulated by Issac Newton.

This formula depicts in a very simple, almost self-explanatory way (and readable in any language) the Law of Interaction, as formulated by Isaac Newton. Now we may form a compound symbol to stand for the meaning of force.



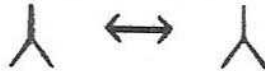
This compound symbol doesn't explain what force really is. But it tells you a lot more about the circumstances, than the English letter symbol f-o-r-c-e do. It tells you that there must be two bodies of chemical matter, and that there is action and reaction, equal and opposite.

Now our symbol for chemical matter is a very general one. It refers to 2 stones or 2 celestial bodies; it refers also to 2 humans and to 2 minds. However, the last two THINGS human and mind refer to animated matter, not to lifeless things. This complicates "matters" and we must be watchful, observing nature and making our assumptions to fit nature. We may write



Realising that the law of interaction can be observed even among humans, insofar as

humans influence each other by their actions and reactions we may write



The Law of Interaction between Humans

Now let us make a few experiments to check our formulae. If one stone hits another stone, it will get the hit back. If I hit with my fist a stonewall, the stonewall will hit back. And if a man hits another man, the first primeval reaction will be to hit back. Call it an analogy only, if you want, but you can't explain that urge, which originates in the cells and their molecules, electrons, etc. of a human to hit back, when being hit.

So-called "primitive" people will hit back, no matter, what happens afterwards. So-called "civilised" people will quickly assess the situation, and - if the attacker is too big and brawny - they may not hit back, but withdraw. However, the primeval forces within their living cells will revolt because of the suppression of this primeval law of nature. They itch to hit back, they must hit back, and they might hit back sooner or later in one form or another.



Symbol "for"
see p. 302, derived
from "exchange" symb.

and who kills shall be killed. So strong are these forces within us, whose "nature we don't know" (Jung) that our reaction is expressed in the loftiest terms: the law of God, the law of the Bible, the Right of Man, Justice, Law, Order, or at least Self Defence.

Now, Newton, formulating the Law of Interaction did not give any practical advice in it. Practical advice is usually given by the practical engineer, whose job is to interpret the laws of nature for improvements in the technique of living.

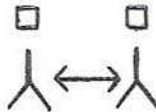
A practical engineer, looking at the symbol formula



might advise us:

"Thou shalt not make a hammer from clay."

and looking at the transformed
formula:



he might advise us:

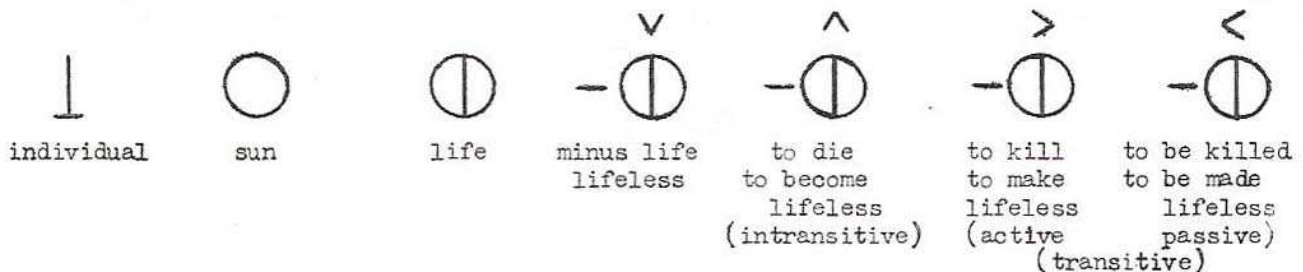
"Thou shalt not kill"

Now, this is not depicted in the formula, but ^{we} infer it, in the same way as we infer practical advice from any formula in physics, chemistry etc. The practical engineer among primeval men, who invented the hammer by binding a hard stone to a stick, must have realised the law of interaction, as later on formulated by Newton. Other practical engineers among primeval men (call them wise men, if you like) realised that the survival of the tribe depended not only of having good tools, but also on other techniques of living. Blood vengeance, as practised even today in some remote areas, leads to the extermination of the tribe by its own members, owing to that primeval urge of reaction within man's cells. So the killing among the tribe must be declared taboo.

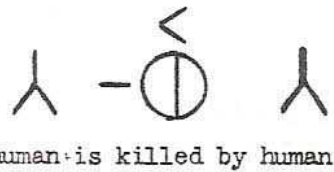
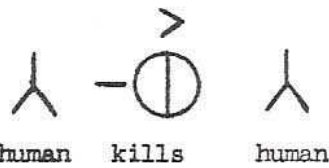
The practical advice: "Eye for an Eye" is barbaric, primitive, ruthless.

The practical advice: "Thou shalt not kill!" is on a "higher level," and is tempted by a consideration for the survival of the race.

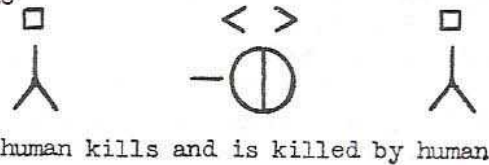
Now we can transform our formula in a similar way as a physical formula. We shall apply it to the killing of humans by humans. We shall now introduce the symbol for Life.



Now we can write the formulae



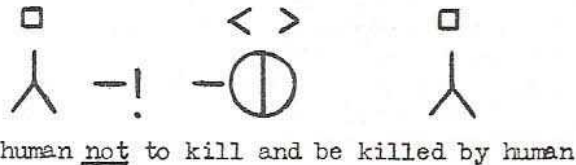
Now we fuse both formulae



This is the Law of War, this is the Law of Blood Vengeance. This is the method to exterminate oneself, the tribe, the human race. No wonder, when prophets rose, they decreed that this senseless murder be stopped:

"Thou shalt not kill"

To write this down, we have to bring the symbol for No! into the formula. It is symbolized by a minus sign, and the exclamation mark, indicating special stress.



As you see, there are two minus signs in the formula. Now we can perform an operation which boys and girls learn at a quite early stage in their mathematics

$$-(-1) = +1$$

In this particular case:

$$- (- \text{life}) = +\text{life}$$

and in ordinary language:

$$\text{no loss of life} = \text{life}$$

The two minus signs offset each other and we may now write our transformed formula



which we can freely translate:

Humans to live and let live

Now this mathematical treatment is nothing unusual. Once we start from the premise:

Thou shalt not kill

we must arrive at

Live and let live

It may be amusing (to say the least) to find that the symbols of semantography enable us to arrive at these Laws of Ethics by starting from the Law of Interaction. You can still see the symbols of this law in the indicators on top of the symbols



The above transformation have been made for a particular case: the killing of humans by humans. Now let us go back to the original formula, which expresses the Law of Interaction between Humans in the widest sense. This formula we shall write down again.

The Law of Interaction between Humans



The practical conclusion which we may draw from this formula for improved techniques of living is:

"Whatsoever ye would that men should do to you, do ye even so to them, for this is the law."

Those readers who may ridicule all this are advised to read those parts in Leibnitz "New Essays on Human Understanding" in which the great mathematician predicts, that this kind of reasoning will one day come true, through the medium of an ideographic writing, similar to that of the Chinese but "better than theirs".

Those readers who find the derivation of the laws of Ethics from the laws of Matter too "materialistic" (whatever this may mean) are advised to read the writings of Einstein, Jeans, Eddington, Schrodinger and many others. Modern physics has firmly established the experimental proof that Matter is Energy and Energy is Matter. If we try to translate this into Matter is Spirit and Spirit is Matter, we must be careful to distinguish between the different meanings which we find in the dictionary under the heading "Spirit". Just five pages back in this chapter, we have touched upon the inexplicable property of matter (electrons, protons, neutrons, etc, forming living cells) to act as if guided by a miraculous reason, skill, experience, knowledge, wisdom. We look into the microscope and the telescope and see the harmony of the stars, and the harmony of the chromosomes and cells, and electrons. Their harmony is part of the great harmony which physicists and mathematicians find in the whole of the universe.

The first interpretation of the Law of Interaction was: "Eye for Eye, Tooth for Tooth, Life for Life". The second interpretation, given as an advice for survival, was: "Thou shalt not kill", and in general: "Whatsoever ye would that men should do to you, do ye even so to them". If it is "Love for Love and Hate for Hate" as the primary reaction, the advice for survival is "Love for Hate, Sympathy for Antipathy, Care for Aversion." So far, this is the only practical advice and only practical method to turn an enemy into a friend.

The reader may know ^{read} that the symbols of semantography enable us to arrive at such formulae by transformation, like the one shown above. The heart symbol would make our formula easily understood.

However, the heart symbol indicates a human mind, or you may say a human soul. According to our "grammar rules" reactions of a human mind are vague in meaning, and are different in different minds. If we hear the advice: "Love thy neighbour, and love thy enemy", we may interpret this as just a sympathetic attitude of mind towards our neighbour and towards our enemy. Although the words: "a sympathetic attitude of mind towards..." may have some meaning for each of us, it will be a vague meaning, because it refers to a mind reaction, different in different minds. Here again we must follow our "grammar rules" and translate a mind reaction into real physical ACTIONS (observable by a physicist) performed by chemical THINGS (analysable by a chemist) on other chemical THINGS, in this special case: Humans.

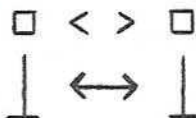
Following therefore our "grammar rules" we must translate the words

"Love thy neighbour, love thy enemy"
"Help thy neighbour, help thy enemy"

into

Only thus would our sympathetic attitude of mind be proved - by real physical ACTIONS of help - only thus would our neighbour and our enemy become ^{convinced} by practical proofs of our sympathetic attitude of mind; only thus could we hope to turn an enemy into a friend.

We could draw the symbol for enemy and then transform our formula according to our reasoning, or we could write the Law of Interaction as shown above in another form and then transform the formula. The formula above show the symbol for male human. We could draw instead the symbol for human individual, showing an upright being. This symbol stands for male or female humans.



The Law of Interaction between human Individuals (other version)

On page 276 in the second book, we have learned the symbols for need and help. The primeval meaning of need by primeval man, is depicted by an individual, ill or wounded, so much so that he cannot stand ^{right} up any more and is in danger of falling down.



an individual
upright human



a needy individual
in need of support

This symbol is a schematized picture of what we often observe in life or on the screen, a human being struck and wounded and about to fall down. What he needs is help. And this help is given by another individual who helps him by supporting him.



Need and Help

An individual helping
by supporting another
individual who is in
need of support

This compound symbol is again a schematized drawing of what we have seen thousands of times in life and on the screen and especially in innumerable pictures, depicting the work of the Red Cross helper on the battlefield. A soldier, bearing the armband with the Red Cross supporting a ^{wounded} enemy soldier, and leading him to the Red Cross Station. Exactly this is depicted by the above symbol lines, a geometrical indication of the meaning: Help to the Needy.

We are aware that War, in which humans clash to kill each other is one of the primeval interpretations of the Law of Interaction between Humans. We must deplore the fact, that War is still with us, and as much as this depresses us, we must look out for any tiny flicker of that other interpretation of the Law: "Whatsoever ye would that man should do to you, do ye even so to them," and consequently "Thou shalt not kill", and "Love thy enemy."

The first words have been spoken almost 2000 years ago, and "Thou shalt not kill" has been said more than 5000 years ago. These words have been repeated throughout the centuries and are repeated today. But, according to our "grammar rules" words alone are not enough. We must translate their meaning in actual and real physical ACTIONS of real THINGS.

Whatever may be said against modern warfare, one thing is sure: In the wake of the armies of the Huns, of the Vandals, and of other people, led by Attila or Tamerlane or Genghis Khan or Kara Mustafa or Napoleon or any other leader before 1864, there were no Red Cross units, who helped wounded enemy soldiers as if they were friends. Only a soldier who found himself in the enemies camp, who saw enemies operating on him, waiting on him, supporting and feeding him and helping him to health and to a new life, only a soldier can appreciate what this tiny flicker of practical application of the words of Jesus mean.

We have seen in the second world war a nation go berserk. They killed off millions of non-combatants, by gassing and machine gunning, but somehow they ^{most (not all) of the captured} treated ^{combattants} of other nations as human beings, because of the "Law of Reciprocation" as we may term it, and as expressed by the words "Whatsoever ye would..." and as brought into a practical application by the Geneva convention of 1864. The Red Cross is only a tiny flicker of hope of man's practical application of the Law of Interaction for the survival of the human race, but it is enough for us to take heart and go further on the same road. Moreover we know that the same advice to mankind has been given not only in the Old and the New Testament, but also in the Koran and in the great books of other religions. We should therefore not be surprised that the Turkish army in the first world war, did not adopt the Cross, but the Moon, symbol of their religion for the modern samaritans in their army. The Jewish army has adopted the star of David, and it may well be that the new independent states of Asia will use a symbol, which expresses their religion. Deplorable as such a division into spiritual factions may be (the Red Cross should be symbolized by one symbol for the whole world) it tends to show that the principle "Whatsoever ye would..." is claimed to be embodied in most of the great religions, and in fact it is, although said in different words and in different languages. Here the adoption of semantography symbols for such laws of Ethics

may prove to be a unifying factor. The symbols are independent of any language and any religion. Moreover these formulae do not represent a direct translation of the "official version" of the Old and the New Testament. Our formula looks like a formula in physics, and can be explained, translated and interpreted with different words and in different versions. Thus, our symbol formula for the Law of Interaction could be expressed in the different versions of the Bible in Hebrew or Greek or Latin or English (King James version or any other version) or in the version found in the Koran or the sayings of Kung-Fu-Tse or in the versions found in the books of Buddhism, Shintoism, or other religions. Our formula would thus become valid in different countries, and in different religions, just in the same way as we find today the same symbols in a formula, displayed in the books on physics written in different languages in different countries. Physicists of any country feel themselves as members of one brotherhood. No doubt, the unifying factors in their "language" as expressed in the formulae, have played their part to bring this about.

Today, we find the peoples of this earth much divided by religious issues, fanned by "shortsighted" people, who pursue their own interests. We see the same sight as in world politics: the peoples of this planet divided by words and their meanings.

Today, a high school boy may come into a foreign country, where a language, foreign to him, is spoken. He may peruse with interest the textbooks of high school boys in that country. He would be unable to read these books, but he would at once recognize the same symbols in the books on chemistry and physics. "So they are learning the same subject," he might say.

Now imagine textbooks on ethics and religion written in different languages, but showing on various pages, symbol formulae, similar to those, shown in this chapter. Our boy traveller might recognize the symbols as being the same, displayed in his books, and he might make the same conclusion: "So they are learning the same subject." Even if we remain as cynical as ever, we could not deny that such a treatment of the "natural laws of Ethics" might have a beneficial effect, no matter how small. In any case, we see with wonder, that in regard to physics and chemistry and other sciences, which use formulae to express laws of nature, the adherents, the fellow scientists, the believers in these formulae are in agreement, even if they find themselves separated by national, religious, linguistic or ideological barriers. These barriers consist mostly in the different interpretation of the meaning of certain words like nation, religion, socialism, etc. etc. So far, these fields have not yet been subjected to a reasoning, similar to that of the scientists in physics, chemistry etc. This new way is attempted crudely, hesitatingly and gropingly in this book. The symbols of semantography may one day be able to be used in this way, as envisaged by the mathematician Leibnitz.

Wise people in any country tell us, that our present difficulties are aggravated by the fact, that our ethical reasoning has not yet caught up with our technological reasoning. Well, this is exactly the theme of this chapter.

But our new symbols offer another advantage unheard of yet. We see today millions of people in every country drifting away from the churches and from religion in general. There are many causes for this phenomenon, but when you speak with those people and search your own soul, you may find certain reasons: a disgust with the abuses of religion in the past, a disbelief in the theories offered, which are in direct contrast with modern school teaching, etc. etc. There are many and varied reasons, and we shall see clearer in this respect when drawing up the structural formula for religion in the next chapter.

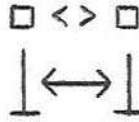
Everyone of us may know some people, who do not go to church, yet they are filled with ideals of ethics, moral and conscience, equal to those held by deeply religious people. Instead of the Bible and the writings of the evangelists and saints, they prefer the writing of Spinoza, Kung-Fu-Tse, Nichomachus, or the ideas in ethics as professed by Einstein. Instead of belonging to a church congregation, they belong to the American Ethical Union, or the Society for Ethical Culture, or other such societies under other names in other countries.

Then there are the "rabid atheists", those people, who have been thoroughly disillusioned and who scorn anything connected with the words Ethics, Religion, Creation, etc. etc. Yet, when you question them about their ideas, regarding the interrelations of humans in a society, they will explain to you in so many words their ideas, which somehow could be expressed by our symbol formula as shown before. They might get in a rage, if you insist that the same idea is to be found in the Bible or the Koran or other books of Religion, but they will agree with you, if you point to books by Spinoza or other "atheists".

So our formulae could be used by believers and unbelievers. They could be printed in books of different religions, and even in books for atheists. And this is something, which may be termed an achievement, although a very small one, but one which may point the way.

When writing these lines, the World Council of Churches had concluded its conference in Amsterdam. Many words have been spoken, and we may expect an approachment. We may even envisage a future Council, embracing all the great religions, adopting a set of symbols for-

mulae to be displayed in every church, in every temple, in every synagogue, in every place of worship and printed in every prayer book of any religion, denomination and language. It should be possible to evolve such symbol formulae, valid in different religions and valid even for the ethical atheist. What has been shown in this chapter is only a beginning. I may conclude these reflections by showing how the last formula, depicted 3 pages before could be further transformed. We started with



The Law of Interaction between Individuals

and developed the symbol for



the needy individual
in need of support

Now we can write



The Needer and the Helper
2 individuals



the Helper
(see p.276)
the supporter



you are helped by me

This represents the passive transitive verb form. We can turn the ACTION indicator around and write the active form: I help you, and we can do this, by drawing the falling line of the needy individual in the other direction:



I help you

In both cases, you are the needer and your line leans on my ^{line} But I may be the needer and I myself may lean heavily on you. We have depicted the ACTION (verb) to help by putting the ACTION indicator on the symbol for the Helper. We can similarly form the verb to need:



I need you

and vice versa



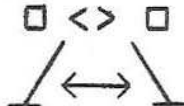
I am needed by you

How we may fuse both formulae:



I need and am needed by you
I depend on, and am depended on by you

Instead of repeating the need symbol, we may draw the arrow symbol as before, indicating an ACTION in both directions



and call this

The Law of Interdependence
between human individuals

Having formulated the Law of Interdependence with our symbols, we may pause to contemplate it. It shows that the humans depend on each other, are leaning on each other... etc; we can find many words to express the relationship, which is geometrically outlined in the symbols. The word "interdependent" is a word, only recently coined. Before, we had "dependent" and its opposite "independent". Now, these words do not indicate a chemical entity or a physical action. According to our grammar rules, they fall therefore in the third class: they are meanings in our heads, they are human EVALUATIONS. Our grammar rules are applied in such a way, as to translate these meanings as best as we can into chemical THINGS and physical ACTIONS, in other words, we must see, whether these meanings fit with the actual happenings in nature.

We may say that Mr. X, a labourer in Chile, acts independently from Mr. Y, a farmer in Scotland. Thus we have restricted the meaning of independent to specific ACTIONS of specific THINGS. However, if we observe nature more closely, we will find that the ACTIONS of Mr. X in Chile and Mr. Y in Scotland are not completely independent from each other. In fact, we shall find that the ACTIONS of human beings in one part of the world, are closely inter-related with ACTIONS of human beings in other parts of the world. The panic which seized a small group of people, gambling on the New York Stock Exchange in 1929, threw the whole world into upheaval, brought depression not only in the United States, but everywhere, including Germany, brought Hitler to power, affected the lives of millions of American boys, affected the lives of the people of the earth as far as the remotest islands in the Arctic and Pacific, and will continue to affect (or effect) the individuals for generations to come.

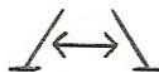
What we observe in nature, is a close relationship between all the phenomena and the individual phenomena which we call humans. Everything depends on everything else.

During the last century, a new word was coined "Independence". It had a certain meaning when referred to specific THINGS, for instance in the fight of the Greeks against the Turks 1821-30. It meant afterwards that laws and decrees were no more issued from Constantinople but from Athens, that is to say, certain specific decrees, formerly signed by a Pasha, were ~~then~~ signed by a Greek. On the other hand, on closer observation we find, that the policy affecting this part of the Balkan peninsula was shaped in Constantinople before 1830 and this was transferred to London after 1830. Now in our times, the British Government's Exchequer has found this a too heavy burden, and so it was shifted to Washington to the great chagrin of Moscow's rulers who do all they can to affect directly and indirectly the life of every human being in Greece. All this is called Greek Independence.

A closer look into all the "independent" states, reveal a similar picture. The word "Independence" has become a sweeping term, has been "surrounded with a halo", has become a myth, and peoples in all parts of the world have died for it, believing in the power of the word, and succumbing to the magic of the word. Only few people took the trouble to translate into the real THINGS and ACTIONS. For the peasant, the word "Independence" meant, that the faces of the tax collectors and their uniforms changed, that whereas a foreigner extorted bribes from him in the past, now this is done by one of his own people. On the other hand, the word meant changes in THINGS and ACTIONS which he welcomed.

Many people in our time have reached the conclusion, that the word "Independence" in its sweeping meaning, represents actually one of the most formidable obstacles to world peace. They urge that the "independent" states, should give up part of their "independence" for a joint management of affairs. They ~~point to~~ ^{point to} THINGS and ACTIONS, which they mean. Unfortunately the magic of the word "Independence" is too strong yet. However, if we introduce a new word "interdependent" and translate this word into specific THINGS and ACTIONS and show in each particular case, that the humans, and the nations and the states are structurally related to each other, we may break the influence of the word "Independence".

Such thoughts as expressed in the above paragraphs may come to our minds, when contemplating the formula



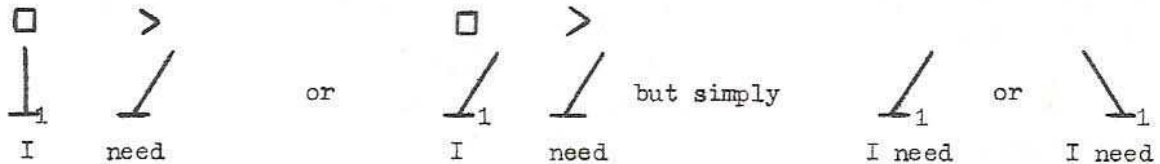
The Law of Interdependence

We deduce various conclusions in regard to specific circumstances from this formula, in much the same way as we do with a formula of physics. And we often transform a formula to arrive at a mathematical or geometrical expression of relations in natural phenomena which give us directly the clue to great inventions, ^{in turn,} which improve our technique of living and alleviate much suffering.

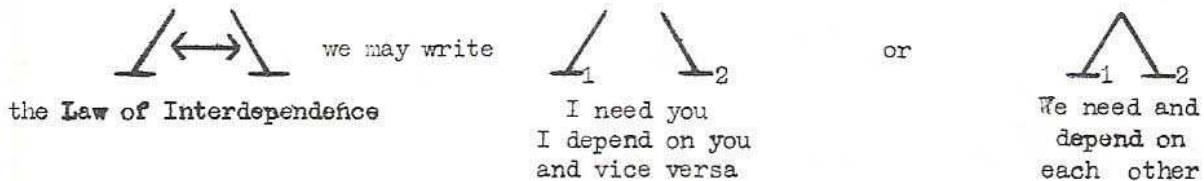
We will transform the above formula and see if we can arrive at geometrical expressions of the relations of THINGS in our world, which may help us to a better understanding of the world in which we live and which we shape. Now, the critical reader may accuse me of

having deliberately shaped my symbols so as to reach such formulae. But I assure him and I beg him to believe me, that I did nothing of the sort. On the contrary, when I started work on this geometrical writing I had no idea where it was going to lead me. I intended it only for practical intercommunication purposes. Then the relationship expressed in the symbols led me further and further. Sometimes in my waking hours at night I shudder at the thought of the coming ridicule, scorn and abuse, which is in store for me, and I am preparing myself for it. But just think yourself in my position and draw with me the lines. An upright human being, you would draw by an upright line. An almost falling human being in need of physical support, you would draw by an inclined line. Then you would support the leaning line by another upright line, and then your thoughts will come flowing... you just can't help it. And this is just the way with formulae in physics and chemistry, etc.

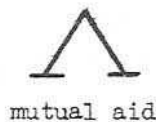
We may transform and simplify our formulae. We don't need to write



Instead of the whole formula



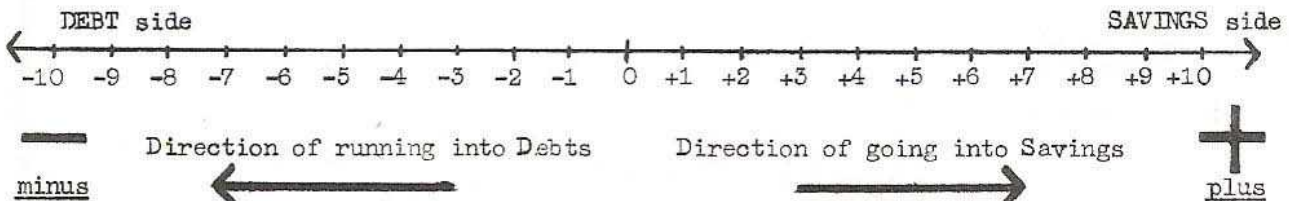
Removing the numbers for I and you, we arrive at a simple symbol meaning



Now, this chapter bears the title: "The Units of Ethics", and I had to write it, because of the conclusions which bewildered me throughout the last years, namely that the meanings of good and bad, right and wrong, good and evil are relative and vague and that they are to be symbolized by a plus and a minus



The reader is asked to peruse the detailed explanations on page 453 ff, in which the geometrical meaning of plus and minus is outlined. For our understanding, we shall repeat only the essential part. If we draw a line and divide it into units of length, then allot special meanings to these units, for instance units of money, we arrive at the following geometrical picture.



Geometrical indication of the minus sign Geometrical indication of the plus sign

As an analogy we may think of units of deeds, and draw our line of "good" and "bad" deeds, then add up our good deeds in one direction and subtract our bad deeds in the other direction.

Now just reserve your smile of ridicule for the end of this chapter. Let us remember that according to our grammar rules, any direction and any symbol for directions, the arrow, indicate a relative meaning. Only per-chance did we draw the line of savings to the right side and the line of debts to the left. We may just as well do it the other way around. Those who learned accountancy know this well.

In our case, we have two bodies, or two humans respectively, facing each other in our formula of the Law of Interaction. The meaning of forward and backward for both bodies will be in opposition. The one will count forward in one direction, the other in the opposite direction. But the meaning of plus and minus, as for instance in Debts and Savings, will be the same, even if their ledgers show the Debit and Credit side on different sides.

This relation between the meanings of plus and minus and their spatial geometrical representation will serve us to understand the following paragraphs, in which we shall try - ridiculous as it may seem - to derive units of Ethics from our transformed formula of the Law of Interaction.

The Law of Interaction

between bodies in general
as formulated by Newton

The symbolization
in Semantography:



The formulation in
ordinary language:

"For every force in nature there must be two bodies, one to exert the force and one to receive it. For every action, or force there is an equal and opposite reaction.

The formulation for a
practical application:

"Thou shalt not make a hammer from clay."

The adoption of a unit:

We may take one blow of a mechanical steam-driven hammer as a practical unit for special purposes. We may take the push exerted by a weight of 1 pound, or 1 kilogram, etc. In science another unit has been adopted: 1 Dyne (from Greek dynamis = power). It is this unit of force which would give the mass of 1 gram an acceleration of 1 centimeter per 1 second.

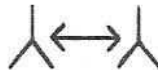
Now we come to our derivations of

The Law of Interaction

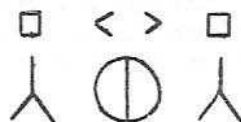
between humans

and its application for society as formulated by Moses

The symbolization
in Semantography:



and its derivation:



The formulation in
ordinary language:

"Thou shalt not kill"

The adoption of a unit:

The unit is 1 human, or 1 human life. Now having our unit, our symbol for right and wrong in regard to this practical application takes on a definite and exact meaning, measurable and observable by a physicist, chemist, biologist, etc. Wrong means the killing of 1 human, indicated in our symbol by a minus, meaning: -1 human. The killing of 2 humans is doubly wrong, indicated by -2. Right means the saving of 1 human, indicated by +1

Now these are very practical units, and in fact, society counts by them, and dispenses justice accordingly. Who saves human lives is right, who destroys human lives is wrong. From this point of view the doctors, the nurses and those volunteers, who jump into water or into fire to save a human life are doing right, and those, who deliberately or by neglect cause the loss of human lives are wrong. And these meanings of right and wrong are no more vague and relative, but are distinct and exact.

If we express the saving of 1 human life by +1, we should not be surprised, that there are even decimals to this kind of mathematics, 1 limb is a part of 1 human, and you find it in neat figures in any accident insurance policy. This is practical mathematics.

What should be done with a human who kills another human? The primeval reaction of our material cells is: "he shall be killed". But there is the advice: "Thou shalt not kill", and in fact, the arguments of those people who fight for the abandonment of capital punishment are very strong. So far, scientists and jurists agree that it does not serve as a deterrent.

War is wrong, from whatever point you look at it. The victors of today, realize, that they have to amend the destruction they wrought, and have to feed the people, they vanquished, in order to prevent a repetition of war. What appears to be conscience, exerted by religion, turns out to be sheer practical consideration for the preservation of peace, for the survival of the human race. But by now, we know from modern psychology, that there is no sharp division between conscience and logical reasoning. In fact, they are two aspects of one thing, the acting of the human brain cells, inspired by something, which we give different names in different religions, and in different ideologies.

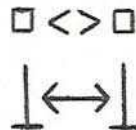
In the foregoing formula, we have present homo sapiens by the drawing of a male human. We usually say mankind, indicating the total of male and female humans. With regard to the advice "Thou shalt not kill", it seems quite in order to draw the picture of the male. "War begins in the minds of men", meaning really men, males. If we disregard the mythological Amazonas, it is the male specimen, who wages war upon other specimens of the human race. If we want to contemplate our Law of Interaction from a more general view, we should replace the symbol for male human, by the symbol for human individual, an upright being.

The Law of Interaction

between humans

and its application for society as formulated by Jesus

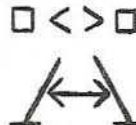
The symbolization
in Semantography:



The formulation in
ordinary language:

"Whatsoever ye would
that men should do
to you, do ye even
so to them"

We have transformed
this formula as follows:



We have given it
another name in
ordinary language:

The Law of Interdependence

The formulation in
ordinary language:

"Help thy neighbour!"
"Help thy enemy!"

According to our grammar rule, mere love - a mind reaction - is not enough. You may pretend to love your neighbour, but you might not come to his aid, when he is in need of help. We must translate our mind attitude into real physical ACTIONS of help. No doubt, Jesus had this in mind, and he even gave the same advice as a physicist would give: "Observe and measure", when he said:

"By their fruits, ye shall know them!"

So far, the advice of Jesus is the only practical method known to man, to turn an enemy into a friend. If a man is hostile to you, attacks you, you may strike back and vanquish him,

but this will not turn him into a friend. On the contrary. His hate will now increase, being the reaction to your blows, and his mind will be preoccupied by one thought: to strike back at the earliest opportunity, and, if possible, ^{to} kill you. Then your son, or your brother or your friend will take up the task of revenge, until the attacker is killed, which in consequence will set his son or friend on the trail of your tribe, etc. etc. ad infinitum.

No doubt, there are maniacs, whose mind reactions are a case for the medical man. These maniacs cannot be appeased (which word was before 1939 the synonym of "to pacify") But when we observe what the Western powers are doing in Western Germany and what Russia is doing in Eastern Germany, in words and in deeds, we must draw the conclusion, that ^{all} these powers want to demonstrate before the German people: "You have been our enemy. But now we want to help you, so that you may become our friend." True enough, there are great antagonisms between all the powers, but, there can't be any doubt, that they ^{all} follow somehow the practical advice given by Jesus, and apply the only practical method to turn an enemy into a friend.

But why a friend? Because only a friend will help you, when you help him. And we the humans and the nations are depending on each other. The Law of Interdependence is only a derivation of the Law of Interaction. If I help you, the reaction will be that I might expect your help, and vice versa. "Whatsoever ye would..."

So far, these last paragraphs have been frighteningly similar to a sermon or a "spiritual tract", and certain people will ridicule it. They are the people, who cannot separate the Laws of Ethics from the doings or undoings of the "professionals" in the churches of the various religions, down to the witchdoctors of some primitive tribe. There are certain people who will react in a peculiar way. If you say to them: "Whatsoever ye would..." the first picture which their mind will conjure up, will be the torture chamber of the Holy Inquisition. And they will have no difficulty in pointing out innumerable instances of real happenings (THINGS and ACTIONS) in which many "professionals" of religion, have supported the "vested interests" of the few in power, against the people who lived in abject misery, and they did it by using words of the Bible.

In the next chapter we shall draw up the complex structural formula for the meaning of religion, and we shall have no difficulty to find that the laws of Ethics, represent only one group in this formula, and that this group is found in the most diversified formulae of other religions, as well as in the writings of ethical unbelievers.

But whatever may be said, we have one practical proof, that the often ridiculed words "Love thy enemy" have been put into active operation by the Institution of the Red Cross. Today, even the most rabid atheist on either side, will accept the help of the Red Cross in any war they wage, and they will co-operate with their enemies: they will help each other. If you are an unbeliever, if the word "religion" gives you a feeling of nausea, if you are a convinced atheist and if you scorn any saying of the Bible - never mind. You too will react strongly if a man will assault you on the street, or if he would offer you assistance. Explain this by the reactions of your brain cells, explain it by psychology, biology, chemistry, physics - the fact remains nevertheless, a phenomenon of nature.

As said before, the Institution of the Red Cross is only a tiny flicker of that "common sense" which we usually attach to those people who observe nature and act accordingly. And this attempt to derive the laws of Ethics from the laws of Nature, through these newfangled symbols of semantography, is again only a tiny flicker in bringing ^{ing} common sense into our thoughts and our doings. Atheists reject the Bible, but they teach, and act according to laws of Ethics. Our symbols are not only readable in any language. They are applicable to any religion, and even to what is called atheism. That is certainly something.

The adoption of a unit:

We have now our formula of the Law of Interaction or Interdependence, and we can now adopt a unit. It will be the Unit of Help, a Unit of physical ACTION to be sure. It may be the smallest ACTION of Help, whatever it may be, but according to our symbols for good and bad, a good deed will bear the plus sign, a bad deed the minus sign, and a good deed is a deed, which helps another individual. The International ^{Organisation} of Boy Scouts has put this idea into practical operation. They demand a good deed a day from each boy scout. However, our symbol for good still bears the mind symbol, the great variable. Some boys in search of a good deed, pester old ladies, who think that they can very well sail the street crossing alone, without the help of that damn nuisance of a boy scout. The old lady just thinks ^{reently} differently.

The mind symbol reminds us that these meanings still refer to the working of our mind, and to understand this working we have to study the teachings of the great psychologists of Biblical time and of our time. For many people there is no antagonism between the two. Many a psycho-analyst sends some of their patients to the church, and many a churchman sends some of their flock to a psycho-analyst. The difference is only made up by words.

And now a last word to the readers who are well versed in mathematics, physics, etc. The formulae of physics, expressed in abstract mathematics make use of arbitrary symbols. The symbol V may mean Voltage, or Volume, or Velocity or anything else we want to mean. However, the formulae of semantography are a queer symbiosis of mathematics and geometry, and this makes them less arbitrary (in regard to their symbols) than the ordinary formulae. Semantography should be an international writing in "ordinary language", the language which the common man understands. Consequently, in semantography the meaning of Voltage will be expressed by a compound symbol in which you will find the symbol for lightning ⚡ which we use already in international danger signs to warn people of high voltage electricity.

The meaning of Volume is expressed in semantography by the outline (or cross section) of a box □, and this too is already an international symbol. The meaning of Velocity in semantography will use the symbol of a wheel ⊗, and if you look at the lapel of railway officials in different countries, you will find this international symbol there.

As stressed many times in this book, semantography should be nothing else than an auxiliary writing, an auxiliary tool. And in this capacity, it could very well serve in connection with mathematical formulae in physics, chemistry, etc. True enough, a formula is the same in different books of physics, printed in different languages (although we find books which use different letters for the same meaning in the same formula) But what is altogether different in different books on physics is the different interpretation of the formula, interpreted in English or French, or Spanish or any other language. Can semantography fill here a need, and - is there a need?

During the writing of this chapter, the postman brought me the newest issue of Philips Technical Communication, published by Philips Electrical Industries of Australia Pty. Ltd. Sept./October 1948. Since 1922, I have worked as research chemist and factory engineer, making electric lamps, radio tubes, and radio parts, and from 1929 up to 1934, I faced the people of Philips in many patent courts of various countries, fighting about our various patent rights. So I am still very much interested in what is going on in the Radio Industry and this newest issue of the Philips periodical, brought me so much good news in regard to this present work, that I think the best I can do, is to reprint part of an article. It expresses thoughts which I vaguely mentioned myself in my chapter on physics, (see p. 368 ff), but which are brought out here with a marvellous clarity.

The article in question is titled "Mathematics and Radio Problems" and is an abstract of a lecture which the scientist Balth. van der Pol gave on the 15th of March 1947 before the Dutch Mathematical Centre at Amsterdam. It was first published in Philips Research Reports Vol. 3, No. 3, and herebelow is an abstract from the abstract:

"We all know what Mathematics is, but Radio needs defining. Radio may be regarded as a branch of Electrotechnics, which in turn is a branch of Technology.

Now Technology may be regarded as Applied Physics (including Chemistry), and we shall therefore consider today the relations:

Mathematics \longleftrightarrow Physics \longleftrightarrow Technology

In my thirty years experience of research work I have been struck time and again by the fact that the mathematician speaks a language different from that of the physicist, and the latter employs a language at variance with that of the technician. This difference in languages seems to me to be one of the obstacles standing in the way of mutual understanding and appreciation.

There is a hiatus between mathematics and physics on the one hand, and between physics and technology on the other, and since technology bears no other relation to mathematics than via physics there are two gaps between mathematics and technology,

A consequence of this is illustrated by a saying from among mathematical circles (ascribed to Cailey): "Bessel functions are beautiful functions in spite of their many applications". Moreover, in Hardy's otherwise engaging book "A mathematician's apology" one finds an underestimation of the value of applied mathematics in technology.

On the other hand, from purely technical sources too I have often come across expressions that bear witness of a lack of appreciation of mathematics. Arguments usually culminate in the question: "What use is it?"

The difficulty in all this lies in the fact that an interpreter is needed between mathematics and physics and a second between physics and technology. But it is well known that to be an interpreter one must be acquainted more or less with the subject-matter to be interpreted. Unfortunately these two kinds of interpreters are seldom met with.

Also the language of the mathematician is occasionally not understandable to the physicist, and ad fortiorum to the technician, as may be illustrated by an example. I recently came across in Grave's "Theory of functions of real variables," (New York 1946), in which on page 168, the author deals from a purely mathematical point of view with the equation

$$\ddot{y} = -g \sin y$$

He observes that this equation is representative of the movement of a pendulum of unit length, and from his mathematical considerations he deduces the following rule:

$$M > 0, \epsilon > 0 :) : E \delta > 0 \omega : |n'| < \delta, |x| < M.) . \\ |y(x, 0, \pi, n') - x| < \epsilon .$$

But as a further explanation (perhaps somewhat reluctantly) he adds: "This means that the pendulum will remain within an angular distance ϵ of the vertically upward position for M units of time, provided its initial velocity is sufficiently small", a conclusion that the physicist and even the technician could give at once in simple language and without mathematics.

Generally speaking, as a consequence of using different languages, the one scientist has little knowledge of the domain of the other. For instance, the technician thinks that the mathematician works in absolutely unnecessary abstractions, whilst on the other hand some mathematician have the impression that technology is represented by very high transformers which one does not approach too closely for fear of being struck dead, or, where they are in oil, for fear of dirtying one's fingers.

Thus Maxwell was able to arrive at the conclusion that electromagnetic waves exist; to achieve this result without mathematical symbols would have been beyond human possibility.

In this connection it is interesting to note the following citation from a letter written by Faraday to Maxwell in 1857:

"There is one thing I would be glad to ask you, When a mathematician engaged in investigating physical actions and results has arrived at his conclusions, may they not be expressed in common language as fully, clearly, and definitely as in mathematical formulae? If so, would it not be a great boon to such as I to express them so? - translating them out of their hieroglyphics, that we also might work upon them by experiment. I think it must be so, because I have always found that you could convey to me a perfectly clear idea of your conclusions, which, though they may give me no full understanding of the steps of your process, give me the results neither above nor below the truth, and so clear in character that I can think and work for them. If this is possible, would it not be a good thing if mathematicians, working on these subjects, were to give us the results in this popular, useful, working state, as well as in that which is their own and proper to them?"

The thoughts expressed in the above passage hold good just as much to-day as they did in 1857."

So far, Mr. van der Pol, and I am very grateful for what he said, because somehow I feel that semantography may be this medium, with which we could translate the abstract mathematical formulae of physics into the every day language of the scientist, the engineer, the technician, the tradesman, and the intelligent man and woman.

Take for instance the installation of a gas, ^{electricity} and water system in a city or a village or a valley. The plumber, the electrician and the mechanic needs some "theoretical" knowledge about the working of gases, liquids and electricity. So do^e the owner of a house and the woman of the kitchen. We learn something about this in school. But we do not become so proficient in all this knowledge, and consequently such formulae as

$$\frac{V_1}{V_2} = \frac{P_2}{P_1} \quad I = \frac{E}{R} \quad \text{or in other symbols} \quad A = \frac{V}{\Omega} \quad \text{or Ampere} = \frac{\text{Volt}}{\text{Ohm}}$$

give us nothing more than a headache and we forget their meaning in no time. Now look up the chapter on "Semantography for special and every-day Purposes in Chemistry and Physics (p. 368 ff and especially p. 384) There you will find simple symbols for "simple" people, who could discern the gas bubbles, the pressure, the volume, the liquid, the thermometer etc, in a new kind of formula, which could be drawn up for the physics books in all languages, because these new formulae are readable in any language; and their symbols are not so arbitrary, because, somehow they follow the outline of the real things.

Faraday was one of the greatest scientists who ever lived. Besides, he was the author of, probably the first book on Popular Science in which he told in simple words, addressed to simple people about the chemistry and physics of a candle. Faraday too, was a professed friend and a deeply religious man. Somehow I feel that he would agree with the use of such symbols for chemistry, physics and, last but not least, ethics.

This would be a good paragraph to end this chapter on "The Units of Ethics". But I feel, it might leave many readers unsatisfied. We may all agree that the killing of a human is wrong, and that the smallest action of help towards a fellow human is good (although totalitarian ideologies practise and preach the contrary in very many instances). But what about our daily life in which we take and give and use the words good and bad hundreds of time every day? What about this ethics and units of ethics?

Some time ago I read in Readers Digest a nice little anecdote. A very old professor, very deaf, was introduced to another professor at a banquet. "Meet Prof. X," said the introducer to the old deaf man, trying to be very loud, "He is professor of business ethics at Y university." "What?" said the old man, putting a hand to his ear. The introducer repeated his statement, louder and nearer to the old man's ear. "Oh," said the old professor, "my hearing gets worse and worse. I always understand "professor of business ethics".

This little anecdote may serve as an example about the meanings of words. When we hear the word "ethics" our minds may conjure up serene wise philosophers, preferably clad in Greek togas, wandering in deep thought among Greek temple columns. But the word "business" may conjure up overfat men, with greedy eyes and hairy hands, frantically trying - if not to cut each others throat - at least to get their hands in the other fellows pockets. And if we combine the two words "business ethics", the imagination department in our brains stops functioning. There is no such meaning. It's ridiculous.

However, if we turn to the men, whose language we should imitate, to the engineers, we find that they have developed a code of ethics and they stick to it. Again, the combination of the two words "engineering ethics" or "ethics of engineering" seem so ridiculous, that we must follow our grammar rules and translate these words (ethics is a meaning in a head) into THINGS and ACTIONS.

If an engineer undertakes to build a bridge, which will sag only $\frac{3}{8}$ of an inch under a load of 100 tons, and which will therefore carry such load with safety, we are very sure, that he will fulfil his obligations. We may be tolerant within prescribed limits, but we want a good bridge, that ^{in our case} bridge for a load of about 100 tons, and we are sure to get it. To deliver a bridge, which would stand only 50 tons, and break under 100 tons - such things are simply "not done" among engineers. It is against their code of ethics.

Similarly, if an engineer orders 1000 steel shafts from another engineer, he wants good steel shafts, and he specifies exactly what he means by good. He gives the exact length, width, etc. the quality of steel (elasticity, etc) in exact figures. However, he knows that the other engineer ^{and} his co-workers are only humans and far from "perfect", and so he knows that he must be tolerant, but again he specifies his tolerance in exact figures. He orders a steel shaft of 25 mm width and he agrees to be tolerant and take shafts which show a plus (+) of 0.01 mm over 25 mm or a minus (-) of 0.01 mm below 25 mm. His order reads: 25mm \pm 0.01 mm. Having fixed this standard the words good and bad take on a definite meaning. Good steel shafts are those which fall within the prescribed standard limits, and bad steel shaft are those which fall outside his standards.

Now we have brought a new word into our discussion "standards" and we can easily depict this meaning by a combination of the two symbols for limits and tolerance.



limits



tolerance



standards

This compound symbol must be relative in meaning, because the first element "limits" (referring primarily to space) indicates a relative meaning. The second element shows the symbol for the mind, indicating that the meaning is related to one mind, and there are no two minds alike. If we refer to "standards of living", "standards of weights", "standards of ethics" we have something in mind, which we consider within the "limits of our tolerance" in regard to living, weights, ethics, etc.

The "standards for steel shafts" to be used in horse-drawn carriages, will be different from the "standards for steel shafts" to be used in watches or special precision instruments. Consequently a good steel shaft for a carriage might be a bad steel shaft for a precision instrument.

However, as each engineer has his own mind, unique and different from the other engineer's mind, they might ^{agree} about the standards to be set up. And the only thing to do is to get together and to fix standards in agreement with each other, and then to stick to these standards. This they have done. In each "civilised" country ^{there} exists a Standards Association or a Bureau of Standards. Owing to its great importance it is maintained by the government of the country. Each national standard association is in close touch with all the others, and all printed matter about fixed standards is exchanged - a true example of international co-operation. Their aim, of course, is one standard for one world for one particular thing. They standardize screws, nuts and bolts among thousands of other things, including food stuff, textiles, illumination in school rooms, purity of water for drinking, etc., etc. Consequently good water and bad water means no more an EVALUATION different in different heads. It is now defined in exact figures.

Only an engineer or a technically minded layman can realize the tremendous beneficial effects of standardization in our lives. But a housewife can realize it too, if she thinks about the chaos which might be created if different balances and different weights were used in the market places. The peace of mind, the avoidance of controversy and hatred depends directly on the fixing and maintaining of standards.

In the foregoing chapters of the three books on semantography, stress has been laid on the assumption that good and bad are vague, ambiguous and relative meanings. Very many readers may have been severely shocked by this assumption, but I hope they see now what I mean. I have furthermore maintained that vague meanings should always be translated into THINGS performing ACTIONS in order to give them a concrete meaning. These THINGS and ACTIONS can be measured and expressed in mathematical figures. A housewife might not believe a grocer that his scales and weights are good. Either she relies on the market inspectors, who go round to see that scales and weights are within the limits of tolerance of the bureau of standards - or she will put the things on her kitchen scale, and woe to the grocer if... she knows she can send him straight into jail. In China, the housewives carry a small decimal ^{in their basket} scale (a calibrated stick with a weight and a hook) and they control the weight right on the spot in the market place.

Robinson Crusoe did not need scales, weights, measures and standards. But as soon as human beings are forced to live together, they need standards and units, in order to live together in peace. And they realize that they can express and must express these standards not in vague terms of good and bad, but in measurable THINGS and ACTIONS.

Now you may say that all this is a far cry from standards and units of ethics, but it isn't. Let us take for instance the statement: "cruelty is wrong". Now we realize that these are very vague meanings. We must translate the meaning of "cruelty" into definite THINGS and ACTIONS. So we say: "the beating of a child is wrong" which is "more to the point". However, there is still the word "wrong" and to define it, we need units and standards. First the unit of "a child". It is a great difference if you beat a boy of 2, or a boy of 16 years of age. Furthermore we need units of "beating". It is a great difference between an occasional slap or a beating lasting half an hour. If enraged neighbours drag a "cruel" man into court, who has beaten his child, the witnesses will have to produce measurements in mathematical figures. The child has been beaten every day, (that means about every 24 hours) and for about half an hour each day (about 30 minutes) and if there are visible scars and cuts, the doctor will measure the amount, the length, breadth and depths of these scars, and the judge will dispense justice (again in mathematical figures of units of money or days in prison).

But we have forgotten the "standards", that means the "limits of our tolerance" in this particular case. Different people may have different standards in their minds. An occasional slap or a birching with no after effects might be considered by many people as not being wrong. Other people however might consider it wrong, because they have other standards. And there are different standards in different countries.

"Love thy neighbour" is a vague statement in regard to that sense reaction "love". "Help thy neighbour" is better, because a vague sense reaction is now expressed by a physical ACTION. But again we need units and standards of "help". In some countries, when a neighbour puts up a new barn, all the neighbours around will sacrifice so many working hours and come to build that barn. It's their standard of help.

Charity and philanthropy have long been measured and assessed by units of money, goods or actions given away. Standards are fixed by the proportion of income. The state cares for hospitals, schools, museums, veterans homes, roads, etc., etc. and fixes the standards of taxes in proportion to the income of each member of the state. Naturally they differ about these standards. Not so long ago, barons and rich monasteries were exempted from

taxes. Meantime, standards have shifted, and now "capitalist" states have no qualms in imposing taxes of 19/6 in the pound, or 97.5% of the income, if it exceeds certain amounts. But standards must shift more, because a great percentage of the population is still ill-fed, ill-clad, and ill-housed (and "ill" can again be expressed in units).

Now, readers, especially with communist leanings, may readily ridicule all this, and may call me "silly," "naive" or a "petty bourgeois". Of course, it doesn't hurt me, because I for one derive the benefit of the grammar rules of semantography. However, I should have no difficulty, ^{to prove} that even Soviet communists adhere and must adhere to "business ethics".

If the Soviet foreign trade commissariat concludes a deal with a capitalist country, and agrees to deliver 100,000 tons of manganese, it must adhere to ethics of business. It must adhere to the time limits fixed and it must adhere to deliver good manganese ore. And good ^{may} mean not less than 82% of MnO₂ for instance.

The same code of business ethics must be observed between a Soviet engineer, managing the mine and the Soviet engineer using this manganese ore in his plant. If the ore is bad, this is very bad indeed, because the vague word bad may be expressed by another string of vague words, for instance "Sabotage against the interests of the toilers and weakening the socialist system" and the accused engineer might have difficulties to prove his innocence.

Millions of men and women have been deported, because they have been found not good communists. The actual sentence conferred is expressed by the word "not reliable". But what means reliable? What units, what standards? What have they done in real physical ACTIONS?

We must get away from the vague words. Even the communists realise this, and when they paint a glowing picture of life in the Soviet Union, they compare standards of living and they measure in units of THINGS and ACTIONS. Well, this is the way it should be done, but first we must agree about the units and about the standards. And inspectors must be appointed to go to the places and see that the standards are observed in America, in Russia and elsewhere.

A passage in Proverbs runs:

"Divers weights and divers measures, both of them are alike abomination to the Lord."

So you see, the old prophets, thousands of years back, have realised the necessity of measuring the THINGS and ACTIONS in units agreed upon. Now we have a simple system for recognizing vague meanings, and a method how to translate them into THINGS and ACTIONS. Then we should not have much difficulty to fix units and standards - even in the realm of ethics. In this chapter an attempt has been made to show that ethics (a series of certain physical ACTIONS by human "THINGS") is an aspect of physics, and physics is an aspect of nature and nature is an aspect of Creation and Creation is an aspect of that miraculous force which has set and keeps the stars and electrons wheeling in their orbits and which - for want of a better term - we have called Creator.

THE STRUCTURAL FORMULA FOR RELIGION

"Religion fulfils a need that men have always felt, the need for knowledge of the fundamental issues of existence. How did the world come into being? Whence did man come? And where does he go after death?"

C.E. Kenneth Mees (10)

"Religion is by its nature incommunicable by words. Religion comes in flashes, in moments of illumination, when we see ourselves not as aliens and exiles in a hostile or indifferent universe, but members of the family, brothers of clouds and flowers and stars and insects.

A faith is what we need; and the old faiths have slipped from our fingers, and we are left to forge or find a new one, a new conception of the purpose of human existence, a new vision of the high destiny of man. Without this, chaos will continue to reign."

Walter Murdoch (21)

The reader who thumbs through this book and - intrigued by the title "Religion" - starts with this chapter, is strongly discouraged from doing so. These are the last chapters of a book about a new idea, and these chapters can only be understood in meaning and method, if the reader has diligently absorbed the contents of the foregoing chapters. If a reader, in spite of this warning, starts reading here, then he should at least read first the foregoing chapter "The Units of Ethics" and the following chapter "Matter, Spirit, Creation and Creator."

In the introductory chapter "Religion" on page 527, I have pointed out that I could not avoid symbolizing the meaning of "Religion" - as much as I wanted to shirk this task. I wanted to shirk the application of semantography to the meanings of socialism and democracy, knowing very well that I am going "to disturb a wasp's nest". I am well aware of the ridicule and criticism, which is in store for me. On the other hand, criticism would be forthcoming nonetheless, even if I would have avoided these chapters. "Semantography, oh yes", would critics say, "a nice plaything for boy scouts, but not for higher ideas in the realm of thought!" So you see, I had no choice.

On the other hand, it might be interesting to employ another reasoning to this very controversial meaning. We should be appalled by realizing that nowhere is disharmony more apparent than in the meanings, which should mean eternal harmony. Religious wars are still with us, as the recent wholesale massacres in India have proved, but even among the "civilised" religions there is strife and dissension, and the communities are split up in innumerable factions which bitterly oppose each other.

On the other hand, the scientists and the engineers have won agreement. They are in harmony in regard to their theories, in regard to their units, and in regard to their reasoning. Somehow, their method of reasoning, called the scientific method has made them tolerant (most precious quality of the human mind) and they will readily discard any theory in exchange for a better and simpler one.

When a method has achieved such successes, may it not be interesting to apply it to a subject - so important for human peace and happiness - which so far has been kept strictly apart.

Firstly, we must realize that the differences are differences in meaning, expressed by words. Consequently, we have to analyse these words, and their meanings. Secondly, we have to realize that these words refer to very complex meanings. The word "religion" is a shorthand word for a great complexity of ideas. People do not realize this, and so they debate about this word, each one having a different idea in his mind.

Now let us apply the method of the chemist to a complex meaning. He builds up a structural formula. There might be a central group of molecules, around which are outer groups, which are interchangeable. In this way, the chemist is able to clear up the structure of a great many different things, and he finds, that they are related to each other, that they are from the same "family", having the same or a very similar centre group, and differ in their outer groups only, which give them different or slightly different qualities.

Similarly we may assume that the various religions established on earth, belong to the same "family" of meanings and ideas. Somehow their centre meaning must be the same, and only their outer groups may differ.

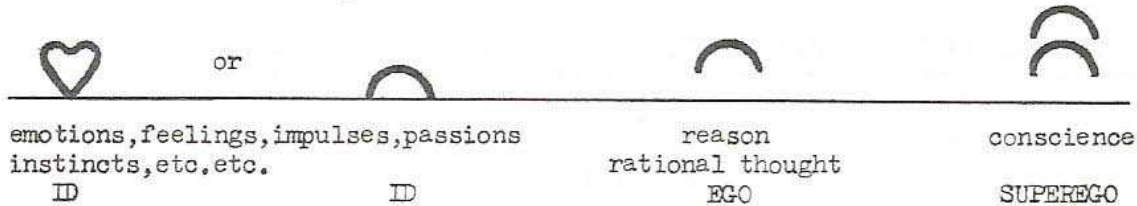
Our ultimate aim may now be clear. Once we have drawn up the structural formulae for the different religions, we may find that they are in harmony with regard to certain groups. At once "a bridge of harmony" may be established, at least with regard to these meanings and this might provide the necessary tolerance to examine the differences in the outer groups and see if they cannot be reconciled.

Now, the reader may realize that on this basis, a whole book could be written, showing the structural formulae for the various religions and discussing one by one the groups in the structure. What we can do in this chapter is only showing how such a structural formula may be drawn up. In other words, only a few hints can be given. For the rabid "religionist" of one sect or the other, every word may be wasted. This chapter is only written for those people, who believe that reconciliation is possible.

So let us start with the discussion of the centre group, the central meaning of "religion". Here at once, we stop short, because we must realize that this central meaning may defy any expression in words. And it does defy verbalisation.

What we primarily understand by "religion" is something "indescribable", a feeling originating in the "depth" of our soul, something we cannot put into words. Perhaps we could express it by our symbols. We have already a symbol for the "depth of our soul", and we have drawn it somehow in conformity with an expression which we find in very many languages. We often say "from the bottom of our heart". In foregoing chapters, es-

pecially the chapter "The Symbol for the Id" (page 171) we have learned that one of the very first written symbols of primitive man must have been the outline of the heart, pierced by an arrow. In moments of great emotions (and there is no emotion greater than love) we feel a sudden sweet pain in our heart, as if - as if an arrow has pierced it. This has been depicted by the cave man, and it has led to the erroneous belief that the heart is the seat of our soul, of our emotions, passions, feelings. Consequently we find in most languages many expressions about the "heartfelt" desire, the "heartbreaking" experience, etc. The heart as a symbol is therefore recognized already in most languages and most countries, (boys and girls see to it) and therefore it is a good symbol - almost self-explanatory. On the other hand, for the medical man and the intellectual, who may scorn this "sentimental" symbol, we have another symbol for the "bottom of our soul", the mind symbol placed at the basis of our writing lines.



Now we shall form a compound symbol by adding our heart symbol to our symbol for Creation, Nature, Creator, etc.



religious feeling

We shall discuss the triangular symbol in the next chapter. In foregoing chapters it served to stand for what we understand under the meaning of Nature, Creation, and if you wish, also for Creator. It is an arbitrary symbol, to be sure, just as arbitrary as the sound symbols N-a-t-u-r-e, C-r-e-a-t-i-o-n are. These words indicate the world around us, with all its miraculous manifestations of stars and stones, of flowers and birds, of animals and men.

In the symbol shown above, we see the symbol for our heart, our soul, our mind confronted and in close touch with the symbol for Creation, Nature, the miraculous world of ours. And this is in fact a schematized picture of what actually happens, when a "religious feeling" originates. When we look up to the starry sky, when we look down into the amazing world of marine life, when we observe the unfolding of a rose, and the unfolding of a human baby, when we are confronted with all this, our heart is stirred to its innermost depths, and we feel in close touch with Creation. This feeling we may call "religious feeling" in its widest sense. When we believe the great teachers of religion, who tell us that the Creator manifests himself in every bit of Creation, then our symbol for Creation may stand also for Creator.

There are many people who, for one reason or another, do not go to the church or the temple, who scorn all the theories about the deities, and all the stories of Creation, yet they may be deeply religious people, and they will tell you so. And even those people, who will hotly deny that they are religious, can't help being stirred profoundly when they look in wonder at their baby son in the cradle, with his tiny thumbs and fingers, complete with nails and rosy skin, the tiny mouth, tiny nose and those little eyes, and when they realize that this wonderful creature came out of a miraculous union of two tiny clusters of cells. The feeling which overawes them is a truly religious feeling.

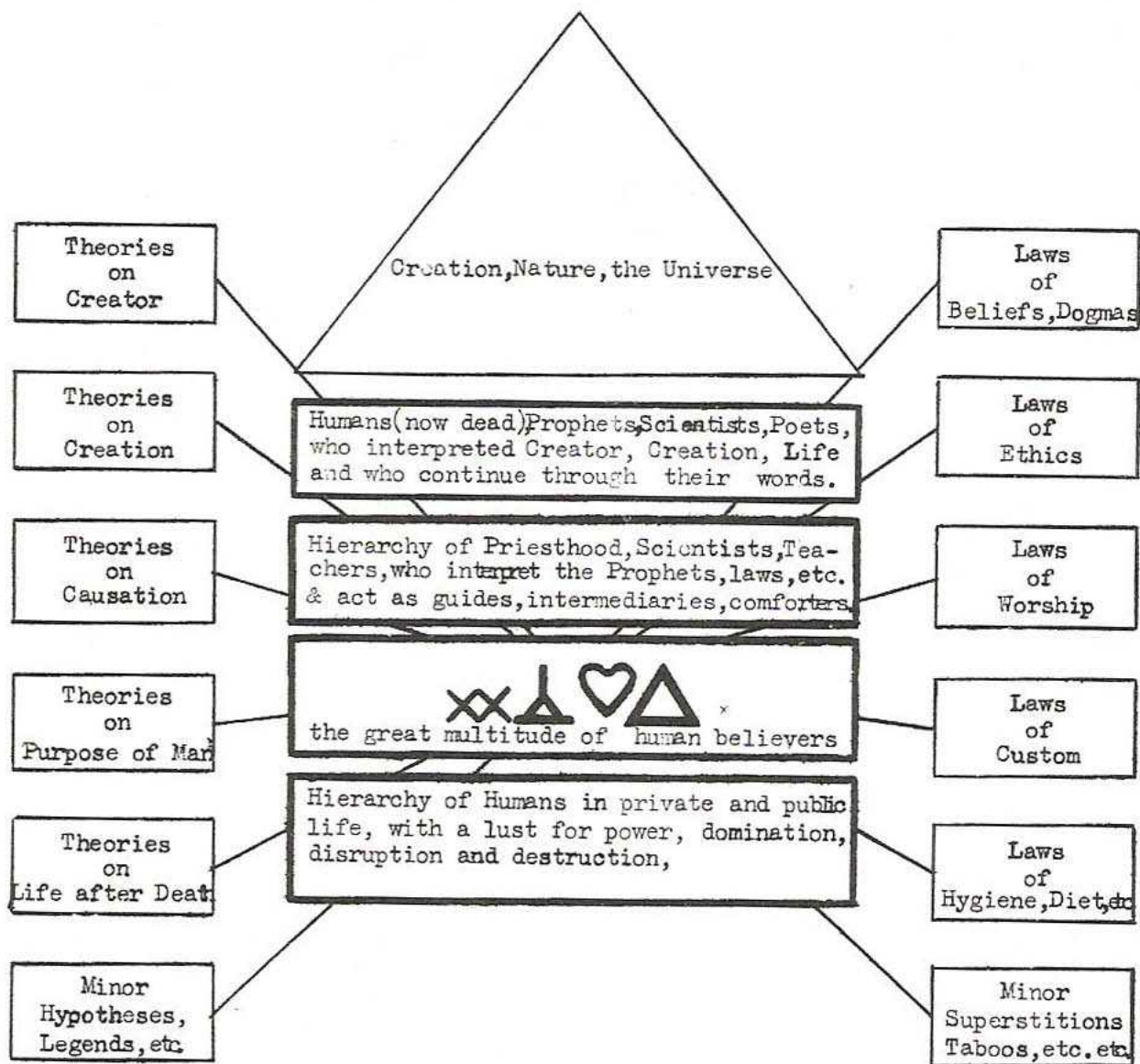
And so we see that this symbol writing can help us to a symbol, which may be equally accepted by believers and unbelievers, by pious people and by atheists, by philosophers and by primitives. All of them may have the greatest difficulties to express the meaning of the symbol in words. The symbol indicates a feeling, which is almost "indescribable". And with each soul the feeling will be different.

This symbol will then be the centre symbol in our complex structural formula for the meaning of religion, as it is commonly understood. Around this centre group we shall place various outer groups.

We shall now attempt to draw this structural formula. The reader is again asked to exert his utmost benevolence and desire for understanding towards this attempt. To many, it may well seem blasphemous, but only because the various groups will not be symbolized by geometrical symbols, but by word symbols, which may have different meanings with different people. Take for instance the word "spirit". It may mean the Creator, or the "holy spirit" or a supernatural being, or a ghost, or a soul, or a kidnaper, or a demon or many other meanings more.

Furthermore keep in mind, that this is a first attempt, to be modified, enlarged and improved. Moreover understand that this structural formula is drawn up to cover not only so-called "civilised" religions, but also the religions of primitive tribes and peoples. True enough many outer groups might be missing with certain beliefs, not excluding the beliefs of the unbeliever.

AN ATTEMPT AT A STRUCTURAL FORMULA OF THE MEANING "RELIGION"



It should be understood that the above structural formula for the meaning of religion could be drawn up in hundreds of different ways. Moreover, each of the indicated groups of Theories and Laws could again be drawn up in a structural formula of its own. The wholesome semantical effect of such a structural treatment of a complex meaning would

be very great. It would teach the pupils and future citizens that the meaning of the word religion is a very complex one. Consequently, if we ever discuss this meaning with our friends or opponents, it is useless to debate the meaning all at once. It is impossible. If you use the word religion you might think of a particular group in the structural formula. But your opponent in debate might think of another group. Such discussions lead nowhere, but this is the way such discussions are carried out nowadays. "Religion, bah!" your opponent might say contemptuously, and he might think of the erring ways of many men of the hierarchy of priesthood, of the religious wars, of the torture chambers of the Holy Inquisition. But if you present him with a structural semantical formula, similar to the one, shown on the foregoing page and if you would say to him: "We can't discuss the meaning of religion all at once. Let's discuss right now the meaning shown in the centre of the formula. Let's discuss that feeling which arises in us, when we look up to the starry sky^{and} when we look down at the unfolding of a rose." It might well be that you both would soon find yourselves in agreement. Then you might proceed to another group, let us say the laws of Ethics, and you might find, that your opponent, although an atheist, might agree with you on many points. Then you might proceed to the many instances in which the name of God and Religion has been misused by men to commit the most unspeakable of crimes, and again you both might find yourselves in agreement with each other. Only by analysing the complex meaning of religion and by drawing up a structural formula, can we keep apart all those different aspects of that complex meaning.

However different we may draw up such a structural formula, its general aspect would show the symbols for the human beings, confronted with Nature. These two meanings, refer to something real, something which exists, something we can measure, weigh, observe. These two group of THINGS, the Humans and Nature as a whole, are depicted in the centre structure. We see three groups of living human beings, topped by ^{of them} prophets, philosophers, poets of former generations. Above these four groups towers the symbol for Creation, Nature, the Universe, all that which fills us with awe, wonder and thought.

But the outer groups, referring to the Theories and the Laws, do not indicate something real in the sense mentioned above. All these groups refer to words, sayings, theories, and their reality is restricted to the material paper of the books, in which they are printed. All these theories and laws are composed by words, some^{of them} said thousands of years ago in many different languages, translated into others and interpreted differently, because many words have different meanings in different contexts.

It should be understood that the theories about the Creator, about Creation, about Causation, about Life, etc. are not restricted to those theories found only in so-called "religious" (whatever this wholesale term means in this particular context) books. We must include the most modern theories, brought forward by the modern prophets Einstein, Eddington, Jeans, Millican, and a host of others. They too interpret the meaning of Creation and Creator, of Causation and of Life, and of all the meanings on which the religious books give an answer, or try to give one.

Our first thought will go to the Book of Books, to the Bible. We are told that, there - God has spoken. But we can calm down any rabid unbeliever by saying that these words: "God has spoken" must not be taken literally for the whole of the Bible. In fact, the instances in the whole Bible, where the words of God are cited, as having been spoken literally by God, are few in number. A part of the Bible is taken up by the recording of wars of conquest and of most atrocious crimes. However, a great part of the Bible is filled with beautiful words, with lofty ideas, with sayings of great guidance to all of us. We can calm down any unbeliever by saying that the Bible has been written down by human beings, who have acted under an inspiration, a mind reaction, caused by "something" to which many of us give the name of God, and many others of us prefer to give no name at all. These others, who call themselves "unbelievers" are the men and women, who have been thrown in confusion by the attacks which have been made in modern times on the meanings of the words in the Bible. They just don't know what to think and what to believe.

Now, once we see this phenomenon from the side of semantics, we understand why so many people differ in their interpretation of the words of the Bible. We understand why there are various translations of the Bible, various versions, and various official and unofficial texts, and why the very same version means something different to different people.

We may now understand why the men who aspire to become ministers of any of the various Christian denominations are compelled to take up the study of Hebrew. Finding themselves often in disagreement over the interpretation of a passage in the English version of the Bible (the King James version) or of the French or Spanish or German version,

or any other translated version, the only sensible thing to do, is to go back to the original text, written in Hebrew, and study the original meaning. This however is no easy task, because ^{Biblical} Hebrew is a dead language and has already been a dead language, when the Jews returned from the captivity in Babylon some 2500 years ago. Jesus spoke the language of the people, Aramaic. But Aramaic was not one language only. Under this name a group of languages and dialects is meant. Now a modernised Hebrew is revived in Palestine.

Now, suppose we study the original Hebrew text and try to get the meaning of every word. Unfortunately we have not with us a dictionary, compiled at the time, when the Bible was written. Consequently we have to guess the meaning of every word in the different contexts. There are of course modern dictionaries, but these are based on the interpretations of the students of bygone centuries and a glance in the commentaries to the Bible, shows us, that the students are very often not in accord as to the meaning or various meanings of a word. One example should make this clear.

We all believe that the fundamental creed of the Jewish religion, based on the Old Testament is the belief in One God. It is what we call Monotheism. We find this creed in the words of Moses (Deuteronomy, Chapter 6, verse 4). Here below is the original text with the meaning of each word underneath the Hebrew words (which are read from right to left)

שָׁמַע	יִשְׂרָאֵל	יְהוָה	אֱלֹהֵינוּ	יְהוָה	אֶחָד
HEAR	ISRAEL	JEHOVAH	OUR GOD(S)	JEHOVAH	ONE

The true believer is not allowed to utter the name Jehovah, so we find the following translations

"Hear, O Israel: The LORD our God is one LORD" (Christian Authorised Version 1611)

"Hear, O Israel: The LORD our God, the LORD is one" (Jewish Publication Society of America, 1943 "The Holy Scriptures")

Magil's "Linear School Bible" of the Hebrew Publishing Company New York does not circumvent the name JEHOVAH by LORD and thus translates the above line more literally:

"Hear, O Israel, Jehovah is our God, Jehovah is one".

Even this translation is not literal, because the "is" is inserted, which is not found in the original text. In the chapter "The tricky word "IS" (on page 413) you have found a citation from the book of Bodmer and Hogben "The Loom of Language" (5) in which they stress the fact that the translators of the authorised Version of the Old Testament, put the is in italics, "because the Hebrew language has no equivalent for them, when used in this way".

But another diversion in translation is found in the translated text, and in fact a most amazing one. The original Hebrew word meaning God is in the plural. It means Gods.

Hebrew is an inflected language. Little endings indicate the plural, pronoun, etc. The plural in English is in most words expressed by inflection, by adding the ending -s. But whereas in English the possessive pronoun is put before the noun, as in: my brother, my brothers, it is different in Hebrew: brothermine, brothersmine. The Hebrew word shown above, which is pronounced elohenu means actually Godsours, meaning our Gods. Christian and Jewish theologians as well as all Hebrew dictionaries are in agreement that the word elohenu indicate the plural of God plus the possessive pronoun ours.

This may seem very startling to many readers, and in fact the plurality of Gods in the credo of One God makes no sense, grammatically and semantically. To find out where the ambiguity lies, we turn to the first commandment, which runs:

"Thou shalt have no other gods before me."

The Hebrew word, meaning gods without the possessive pronoun ours is written thus

אֱלֹהִים
GODS

and pronounced elohim. Having now determined the proper Hebrew word for gods we turn to the first verse of the Bible, which runs:

"In the beginning God created the heaven and the earth"

and to our astonishment, we find in the original Hebrew text again the plural elohim, Gods. The verse should be read: "In the beginning (the) Gods created the heaven and the earth"

Some Christian theologians believe that this grammatical fact in the Old Testament is a sure indication of - if not the trinity - at least of the plurality, or as they call it "uniplurality" of God, and they deduce from it the trinity.

Jewish theologians although admitting that the word is used in the plural, maintain that it is the "plural of majesty" and they bring forth many undeniable proofs that the "plural of majesty" was very commonly used throughout the Semitic world. These proofs are citations of passages in the Scriptures. However, the other side is not tired of bringing forth other citations as counter proofs for their claim. All this, of course, is a fight about words, used and written down thousands of years ago, and the same word has different meanings in different contexts.

Now, there is another word in the credo of the Old Testament:

"Hear O Israel, the LORD our God, the LORD is one"

and this word is one, pronounced ehod. Surely, here we have the key to the meaning of ONE GOD, even if we submit to the idea of the plural of majesty. But how can we ascertain the correct meaning of ehod? Only by looking up all the passages in which this word occurs, and trying to get the meaning out of the context. There is for instance the passage:

"Therefore shall a man leave his father and his mother, and shall cleave unto his wife, and they shall be one flesh."

Such meanings are interpreted by the method of the modern scientist: by observing the physical world. And no one has yet observed that man and his wife became one flesh. So the word ehod in this particular context means a kind of unity. This interpretation favours the view of some Christian theologians. Another citation is for instance "Behold they are one people (a unity of a plurality). Not so favourable is: "Let the waters under the heaven be gathered unto one place." Those theologians argue that waters is in the plural and that the one place is the place where the multitude becomes a unity. To make sure that ehod means not one but unity, they searched the scriptures for the word expressing absolute singularity and sure enough they found it

אֶחָד

one

in Genesis, Deuteronomy

יְחִיד

one

in Jeremiah, Amos, Psalm 25

Needless to say that other theologians hotly contest this interpretation. And we know that almost any passage in the scriptures and in the writings of holy men has been differently interpreted throughout the thousands of years. The above example has been cited to show, that even the meaning of the One God in the Old Testament, about which there should not be any doubt, is contested, and this refers to the highest meaning of the Christian, Jewish and Mohammedan religion. How ^{much} more diversion and dissension do we find with regard to less important meanings in religion and religious literature!

So we see millions of people engaged in interpreting the Bible, that means the "words" of the Bible, that means the words of different versions in different languages. No wonder that much confusion is created. There are powerful sects, many of them in direct opposition to the accepted religions, who have found interpretations wholly different from the accepted interpretations. There are for instance the Bible Students, or Jehovah's Witnesses, as they prefer to call themselves. Without a qualm, they will point to the passage which is a direct prophecy of the re-election of President Truman, and without hesitation they will quote a passage referring directly to the false prophet Mr. Gallup. They find anything and everything predicted and prophesied in the Bible, and they are foolish enough to make their predictions with regard to the end of the world ("millions who now live, will never die") to the battle of Armageddon, which they predicted as World War I, then World War II, and now for sure the coming World War III. But they did this already in the Napoleonic Wars, and the wars before.

And they believe sincerely in what they read out of the Bible. They believe sincerely that only their interpretation is right and the interpretation of other sects is wrong. They are believers and they are semanticists. Without knowing it, they make the mistake of taking the words for the real things, and their writings and sayings are often confusing and unfathomable, as many of the prophecies of old are. But they believe,

We can draw up the structural formula for each sect, similarly to the formula shown on page 568, and we would have to write down the differences of the ^{ev}ouy groups; the dif-

ferences in their beliefs, their dogmas, their ethics, their laws of worship, their customs and their taboos and superstitions. We may find similarities among the outer groups of different formulae, not only with regard to the laws mentioned above, but also with regard to their theories on Creation and Creator, life after death, purpose of man, etc. etc. We would realise that we deal with different sets of beliefs, which in this or that respect show a "family likeness", and which could be the basis for reconciliation, once these believers stop clinging to the mere words.

Then there are many millions of people in the "civilised" countries, who are not true believers any more. As a prominent educator once pointed out, we teach the children on Tuesday, Thursday and Saturday to unlearn what we taught them on Monday, Wednesday and Friday, and so we make them perfect hypocrites. Those millions of people who believe that the stories of the Bible have been thoroughly debunked, discard anything else of the scriptures. They don't go to church any more, or they go reluctantly (especially in small communities) because absence would be bad for their business or their job, but they don't believe anything the man in the pulpit says.

Nevertheless they too are believers and we could use for them the same structural formula as shown before. Instead of religious beliefs and dogmas, we would have to insert other beliefs and dogmas. Millions of people believe fervently that all the evil comes from Wall Street or the Kremlin, that all the good comes from democratic elections, that Roman-Catholics, Jews and other people are definitely not good, that the monetary system is at the root of all evil, and many more beliefs and dogmas. And these people do believe so fervently in all this, that it takes on the aspect of a religion. Needless to say that these new dogmas are also expressed in words of vague meaning, and interpreted by modern apostles of these various "creeds".

But we can drive the analogy further. Those people laugh about the dietary laws, which are imposed by the various religions. But they will swallow the pills and tonics, which modern medicinemen administer to them, and they will believe in their powers, and not be disturbed, if other people discard them as superstitious. They will not listen to ministers and their sermons, but they will fervently cling to every word of their favourite political prophet. They will laugh about the taboos of the religious believer, but they themselves will touch wood, carry talismans, have mascots in their cars and cross their fingers to avoid evil spirits. Yes, even they are believers.

Turning to the other side of our structural formula, we start enquiring about their theories of Creator and Creation and the other theories outlined in the outer groups. Here we find a ridiculous situation. As to the Creator, they believe that they do not believe in God. On the other hand - you never know - and many of them go to church, if not every Sunday, at least on the high festivals. May be, there is really a Creator, and there will be a last judgement. Insurance is a wise policy.

As to the theories on Creation, they fervently believe that the professors have thoroughly debunked the Bible, and that they have solved all the problems and answered all the questions. If you press into them, they might produce a few stories about Galilei and Copernicus or the titles of a few books about astronomy and biology. It's all in there. Unfortunately they had not the time to read those books, but there one can find all the answers. And they believe in what they say.

Then there is the group of the true unbelievers. They scorn the hypocrites, as well as the true believers, their dogmas and superstitions, their laws of worship and their taboos. They call themselves proudly atheists, and they believe (believe they must) that they are perfectly free from all the afflictions of religions.

Yet the structural formula could be applied even to them. The outer group referring to the Creator, would have to be left blank. The group referring to theories of Creation would contain their beliefs in some astronomical and biological hypotheses, at present in vogue and very likely discarded 20 years hence. They will fervently believe in the ether or the proton or the curved space or whatever else will come along in the near future. When pressed about their belief as how the world came into being, and how life developed on earth, they have their nice little dogma and they will chant it at any time, when their faith wavers a bit. The stars, and the electrons, the amoebae and the vertebrae, they came into being - "just by themselves". It's so simple, so easy to believe, and it stops effectively any doubts about the Why and How which may arise in their believing heart.

Yes, they too are fervent believers. They discard the belief in a Creator, because no one has yet been able to see him, but they have no qualms in believ^{ing} in the ether, although no one has yet been able to see it. They too have their little taboos about customs and diets and they too have their priests and prophets, the luncheon speakers, the fashionable lecturers, the experts, who give sensational interviews about their theories and prophecies, which the very next year may be disproved and discarded as superstition. Yes, they too have their religion and even for them the structural formula could be drawn up. And they too have not realised that their beliefs are expressed in vague words.

In fact, if we look around in the modern world for the fervent believer, for the people who believe with all the fibres of their heart and soul, for the men who are ready to die for their belief and equally ready to put fire to the faggots which should consume the heretic, we find these passionate believers among those, who fight against any religion - the extreme socialists, the communists. This does not apply to those, who under the threat of force will confess to any creed, but to those men and women, who really and truly believe in the words of their prophets and their priests. For them, socialism and communism is their new and - as they believe - better religion, and they are utterly convinced, that it will bring salvation to mankind.

When you meet such honest believers, you will find, that they have been terribly disillusioned in their youth. All their ideals, all their innocent religious beliefs, all their hopes in the future of mankind have been shattered to pieces. Not content to play the part of the hypocrite, or the lukewarm agnostic, they set out to find the true way to heaven, the only true way which must exist - and sure enough they found it.

With all the fervor, displayed in past centuries by church leaders in their extermination of false beliefs and false believers, we see the men in the Communist states trying to create a new religion. All the paraphernalia of past heretic hunts are displayed again, the arrests, the tortures, the trials, the confessions, we find them again in our modern world, including the glorifying chants to the highest in the hierarchy, the carrying of colossal pictures in huge processions.

The old churches have grown tolerant. Today you may go up in any church and shout some very blasphemous things. Nothing spectacular will happen to you. You might be gently requested to leave, or you may be carried out and if some energetic member might give you a parting kick at the church portal it is not because you have insulted God or even denied his existence, but because you have behaved stupidly. But shout blasphemous words about Dialectical Materialism or about Marxism and Stalinism in a communist gathering in a communist state and you are doomed.

"Dialectical Materialism", wrote the scientist Eric Ashby, who spent 2 years in Soviet Russia ("Scientist in Russia", Pelican Book A 186, 1947) is the official philosophy and no activity of the state, not even scientific research, may be inconsistent with the official philosophy. In 1932, at Leningrad, the All-Union Conference on the planning of genetics and selection passed a resolution that genetics and plant breeding were to conform with dialectical materialism!

There is the prophet of a "new genetics" Lysenko of which Ashby writes: "He is not a charlatan. He is not a showman. He describes his own writing as always impartial, although passionate, and the writings of his opponents as "passionless, cold-blooded and measured, yet extremely partial". He identifies his work with the welfare of Soviet agriculture, so that any attack on him he interprets as an attack on the Soviet state. He is fired by his mission to scourge bourgeois genetics out of Russia, because he really believes it is harmful. He was aptly described by one, who knew him well as "like Savanarola".

And like Savanarola, Lysenko attacks his opponents. "The argument by heresy-hunt" writes Ashby, "was used with deadly effect against the most outspoken and devastating critic of Lysenko, the famous Russian biologist N. I. Vavilov. Vavilov probably went beyond safe limits in condemning the new genetics as an outbreak of medieval obscurantism. He paid a high price. He was accused of dilatoriness in getting practical results, of lending support to fascists by his theory of origin of crops, and of aligning himself with Bateson, the leader of genetics in England. In 1940 he was deprived of his directorship of the Institute of Plant Industry. He was subsequently imprisoned and he died, without any announcement or explanation, probably in 1943."

It should be born in mind, that Ashby is a biologist himself, and genetics and plant breeding is his own field. He is therefore in a position to give an account of Lysenko's

"new genetics". He writes

"In experimental biology the only satisfactory test of a claim is that the crucial experiments can be repeated by other workers. Lysenko complains that his opponents will not take the trouble to repeat his experiments. There is some substance in this complaint but some workers have tried, and have failed to reproduce Lysenko's results. When however, other workers are unsuccessful in modifying heredity by grafting, or in increasing yields by mass-pollination within a variety, Lysenko simply replies by asserting that they are bourgeois-Mendelians or they have not reproduced the "right" conditions. Since Lysenko does not specify what the "right" conditions are, the controversy has to be dropped at that point. The only reasonable conclusion a biologist can reach about Lysenko's experiments is that they have so far proved nothing, and the results do not point to any useful application of dialectical materialism to genetics."

Ashby goes into much detail to describe Lysenko's experiments. The above lines express only the conclusion drawn. We are then not surprised to hear that "All Lysenko's writing is in Russian and very obscure Russian at that," or "that Mendel was a priest is sufficient to discredit his experiments" by Lysenko. This latter fact, proves more than anything else the fervent faith of this modern Savonarola pitched against everything which he considers "bourgeois", "fascist", "capitalistic", "theistic", and a host of other abstracted adjectives more.

Now, it is easy to discredit Ashby's writing by accusing him of being antagonist to Soviet science. But this is not the case. On the contrary. The book simply overflows with praise and respect for the Russian people and the Russian scientists.

"It can be said without fear of contradiction," says Ashby, "that nowhere else in the world, not even in America, is there such a widespread interest in science among the common people as there is in Russia." And he cites Edouard Herriot, who writes that, "Soviet rule, has bestowed on science all the authority of which it deprived religion."

With regard to Russian scientific research, especially in genetics, Ashby writes: "Russia has made notable contributions to genetics; indeed in some branches of the subject Russia has set the pace for the world research. And it is with some bewilderment that the scientific world has heard, over the last decade, reports of a "new genetics" in the Soviet Union, which denies all the principles of ordinary genetics, condemns the works of Mendel and Morgan as fascist, bourgeois-capitalistic, and inspired by clerics; disdains to use the experimental technique or the canons of criticism of other scientific workers."

As to the Russian scientists in general, Ashby writes:

"The outstanding impression, on the foreigner who works among Soviet scientists is that the bulk of Soviet science shows no signs of having been influenced by Marxian philosophy at all; it has clearly been carried out by Western methods and it conforms to Western canons of criticism."

However, the Russian scientists play safe. When they publish their results on research, they find it advisable and healthy to adjust the conclusions and express them in such language as to create the impression that they are in conformity with the doctrines of Dialectical Materialism, and especially with the principles laid down by Lenin himself in his book *Materialism and Empirio-criticism* (English translation by A. Fineberg, London 1933). In this book Lenin expounded the "principles on which scientific research should be conducted".

One can imagine what would happen if the latter book is scrutinised by a semanticist. This has been done by Anatol Rappaport, research associate in mathematical biophysics, University of Chicago, in an article "Dialectical Materialism and General Semantics" (published in *ETC. A Review of General Semantics*, Vol V, No. 2 Winter 1948). Rappaport finds that Lenin used a host of "labels to discredit the views of one's opponent", and he finds that Lenin's method is still used in the Soviet Union. "Labels are still used as the most frequent tool in all polemics. A list of -isms used to designate various modes of expression beginning with deviations from 'socialistic realism' in musical compositions up to political heresy inclusive, would fill a small dictionary." Rappaport proceeds to give a "part list of -isms, both good and bad, used by Lenin in his *Materialism and Empirio-criticism*" to designate various currents of philosophy:

"Agnosticism, agnostic semisolipsism, agnostic positivism, apriorism, atomism, atheism, Berkleianism, bourgeois-charlatanism, clericalism, conceptualism, dualism, Epicureanism, empiricism, empirio-criticism, empirio-monism, eclecticism, egoism, empirio-

symbolism, fideism, fetichism, Humism, idealism (theoretico-epistemological and ordinary), immanentism, Kantianism, logical formalism, logical apriorism, materialism, (dialectical, historical, and ordinary) monism, Machism, Marxism, mysticism, neo-mechanism, neo-criticism, obscurantism, phenomenalism, positivism (logical and ordinary), revisionism, realism (critical, naive, and vulgar), solipsism, spiritualism, scepticism, sensualism, sensationalism, scholasticism, subjectivism, theism."

As said before, this is only a part list, and one need not be versed in semantics, to realise that we have here a string of very vague words, abstractions, adjectival nouns, which may be twisted to mean anything.

So we see that the new religion, the new faith too has its holy books written in a language, incomprehensible to the simple people, who has to listen reverently to the various interpretations, given by the official "priest" of the new ideology. But the incomprehensible language does not matter very much for the believer. He believes, because he needs a faith to believe in, and he will embrace the new faith without hesitation, believing that now he has found the truth, even if he does not understand the dark words.

In my lectures on semantography I have witnessed time and again the same spectacle. People in the audience handed me the newspaper of the day and pointed to political utterances to be analysed. When I translated them into semantography and pointed out the vague words, which may mean different things, the reaction in the audience was very much divided. When the utterance of a man from the Western democracies was "torn to pieces", the "democracts" in the audience smiled apologetically. Somehow they agreed and they condoned criticism. However, if I dared to expose the saying of a Molotov, a Vishinsky or any other leader from the Communist block, the people in the audience, who had Communist leanings, almost foamed at the mouth in wrath and anger. Then I realised that I had done a very blasphemous thing. I had destroyed or tried to destroy some saying which to these people seems so utterly true. I had discredited some words, which were part of their creed and their faith. Then I realised that these people too are fervent believers, and that Communism is for them not the substitute for religion, but religion itself. And these are the young people who desert the churches.

We have to blame ourselves for this state of affairs. We teach the children in school religion, astronomy, chemistry, biology without taking into account that the teachings of religion are effectively refuted by the teachings of the natural sciences. Consequently we educate and bring up hypocrites. And those who are honest enough not to stand for this are driven away, and in scorn and despair, are ready to discard anything taught by the religious leaders.

But natural science and religion can be easily reconciled. In fact, the deeper we penetrate into the mysteries of nature, the more are we overwhelmed by a wonderful design, by a sublime order, where we, at first, saw only chaos.

What we have to do is to forego the clinging to vague words. Today, the various religions and denominations are separated by words only, interpreted differently by the different ministers of the different sects. And we take the vague words as having a definite meaning, which they have not. The first step in education towards the above mentioned aim, would have to be the teaching of semantics, the ability to recognize vague words. Sure enough, many cherished beliefs will fall in the process, but they are at present only obstacles, which separate the people. The laws of nature, the laws of ethics, the laws of life and love, of the stars and the electrons are only facets in the one great design. Once we recognise ^{and overcome} the confusion created by the words, we should easily see the great purpose of man on earth, in harmony with the universe: the creation of order out of disorder.

I am fully aware of my inability to say in so many words, what other people have said much better. We are more or less convinced that the world is in chaos, that utter madness reigns in the world today, that we are drifting steadily towards destruction, annihilation and extermination. We are convinced that our thoughts are confused, and we must realise that confusing thoughts are provoked by confusing words.

MATTER, SPIRIT, CREATION AND CREATOR

"In every important advance the physicist finds that the fundamental laws are simplified more and more as experimental research advances. He is astonished to notice how sublime order emerges from what appeared to be chaos. And this cannot be traced back to the working of his own mind, but to a quality that is inherent in the world of perception."

Albert Einstein (112)

"Science has opened all kinds of perspectives. In particular it has shown life as a slow upward-evolving process. It has shown that there is something in evolution which we must call progress, and it has shown that we ourselves are now trustees for any evolutionary progress that remains to be made."

Julian Huxley (110)

"How can purposive forms of organisation arise without a purpose working cause? How can work full of design build itself up without a design and without a builder?"

Immanuel Kant (111)

"A familiar path to moral and emotional collapse is traveled by those who make of the world's tragic evil an excuse for surrendering faith in life as a whole. They see no purpose in the universe, no God behind and through it, no worth-while destiny ahead. If one can say with a modern sceptic, "The cosmos is chaos; the chaos is I; and I am my interstitial glands," that is an "out" which will excuse almost anything. And in this disillusioned generation, when some of the most damnable things in all history have been done, many are tempted to welcome it. Disbelief in God furnishes an escape for discouraged lives."

Harry Emerson Fosdick (108)

Much which belongs in this chapter has been said in various previous chapters, and the discussion of the symbols to be shown here, can only be understood with the knowledge of the previous chapters.

Consequently there is now little to say about the chosen symbol for matter



matter

In the previous chapters we choose the familiar word THING for this symbol. This word however is used in ordinary language for "anything". A good idea is a good "thing". To put in some hours of work is a good "thing". In these two sentences, the word "thing" has been used to denote "something", which according to the grammar rules of semantography (which are the rules of chemistry and physics) is no THING at all. An idea is apparently a reaction within our brain cells. And hours of work indicate an action.

In order to distinguish the THING of semantography from the "thing" of our daily speech, we have qualified our meaning as a chemical THING, or matter in general.

As pointed out time and again in previous chapters, the new symbol is just as arbitrary as the phonetic symbols t-h-i-n-g or m-a-t-t-e-r are. The only advantage of our geometrical symbol is, that it avoids the many different words in the many different languages for the same meaning. But it does not say what matter really is, and its outline gives us no indication as to the nature of matter. In particular, the above symbol stands for an abstraction we have made in our mind. We could outline with geometrical lines a car, a hammer, a house, a human biped and many other THINGS in the world around us. But all of these THINGS have a quality, which we have somehow abstracted in the meaning matter. They are all matter, they are all chemical THINGS.

It was of course impossible to choose a geometrical symbol which should "almost self-explanatory" indicate that quality matter. I have chosen the square, because this indicates a conception in space, and furthermore, because it indicates that matter itself is a conception full of symmetrical and beautiful design. Out of the molten lava which seems to us to be nothing else than chaos, there will emerge under special circumstances beautiful crystals, smooth surfaces, planes, and angles, a truly divine harmony.

As to the "nature" of matter, we have gone some steps forward during the last 200 years and have enlarged our knowledge about the atoms, conceived by Leucippus and Democritus, nearly 2500 years ago. Today, we have conceived ^{even} parts of the atom, and have given them various names as protons, electrons, neutrons, etc. But already a new conception has been evolved, the theory that matter is a "wave packet". In some illogical way, both theories are today accepted, indicating the crisis through which modern physics is going. The reader may find more about this in the chapters "Physics in Language" beginning on page 200 (especially p. 212).

We may safely assume that future research will disclose more and more about the nature of matter, and in due course, we shall discard the modern theories of today for some other theory which explains somehow better, the manifestations of matter.

However, our ignorance about the ultimate nature of matter is no obstacle for our assumption that matter exists, in spite of those philosophers, who evolved the theory that this world of ours is only in our imagination. The kick of a stone in our back is real for us, and so must be the flight of the stone before it hits our back, and equally real must be the man who throws the stone or the mountain from which it falls down.

Therefore we may safely accept our new geometrical symbol for matter, just as we have accepted the symbol m-a-t-t-e-r without bothering what it really means.

Simple as this assumption seems to be, the difficulties increase considerably if we try the same train of thoughts for the symbolisation and explanation of the term: Spirit. We may easily overcome the bewildering array of different meanings which we find in the dictionary under the heading Spirit. We can safely discard those meanings which indicate alcohol, or a ghost or some other meanings, understood under the term of spirit. In order not to be engulfed by verbalisation of very high abstractions, we shall neglect also those meanings in the realm of religion, usually connected with the term.

Following our adopted method in tracing any meaning down to a chemicical THING, we arrive safely at the human brain, this amazing piece of matter within which miraculously the conceptions of symphonies, of poetry, of ideas about the universe and its creation takes place. We have drawn a simple line, the curved outline of the upper skull to indicate this piece of matter. Its actions we have called thoughts, ideas, etc., and we have symbolized these actions by placing the action indicator on top of the symbol.



brain, mind



thoughts, ideas

Even without reading the chapter "What is Thought?" on page 162 we know that we know next to nothing or nothing at all, about the mechanism, the interactions of physico-chemical corpuscles or waves or whatever else it may be, which brings a single thought about. Modern psychology has only made an attempt to penetrate this mystery, and we use still many words with very vague meanings ^{to} ^{indicate} the actions within our brain.

In semantography we have adopted the popular distinction of 3 parts of the human brain, commonly termed emotion, feeling, passion for the "depth of our soul", reason for the second part and conscience for the third and "highest" part. This coincides with the terms of Id, Ego and Superego of modern psycho-analysis (see chapters pp. 164 ff).

Consequently we have adopted a more elaborate symbol showing these 3 partitions (which of course are not partitioned, but interrelated):



soul
brain, mind

conscience
reason
emotions



spirit
thoughts, ideas

Within these "partitions" we can accommodate any thought, any feeling, any rational reasoning, any idea about God, the Universe, Life, Love, the whole gamut of ^{emotion and} human thoughts.

Again it should be understood that this symbol, too, is arbitrary, giving us no indication as to the real nature of the THING and its ACTIONS in question.

Some readers may think, that the term spirit (disregarding for the moment any supernatural meaning) goes still further than the meanings conscience, reason and emotion. In fact, it does. I shall not indulge in a great array of very vague and very controversial words and sentences to say something about one of the "highest" meanings of man, which has been said much better by great poets and philosophers. Instead I shall relate some experience of my life, a very average life indeed (whatever this means) and one similar to the life of many people. I am sure that many will remember having had similar thoughts and experiences.

Time and again I read in books that ^{people of the} the East and especially wise men in India have advanced much ^{far} in the exploration of what we call the human soul or human spirit than the philosophers of the so-called Western countries. Since my boyhood I was extremely fascinated by all those stories about Indian fakirs and yogis, possessing extraordinary will power, and performing most unusual and well impossible feats. All those stories seemed incredible. Yet, they cropped up in the books of many writers so often, that I thought that there must be some grain of truth in them. As a boy I yearned to go to India and see for myself. There was for instance the story about the "rope trick". An Indian fakir throwing a rope up in the air, which then remains hanging down and boy climbing up the rope and disappearing in the blue. Or Indian fakirs thrusting daggers into their bellies, long needles into their cheeks, which appeared then on the other side, swords pushed into their back and then coming out from their chest without a drop of blood, although most vital organs must have been out.

The fascination which these stories had for everyone, made them soon a subject for conjurers and magicians, who performed similar deeds before audiences, who very well knew that they were deceived by very clever handwork and apparatuses. These performances in turn, made us believe, that the feats of the Indian fakirs are done on the same basis. And in fact, many wayside conjurers in India make a miserable living by performing them. Nevertheless, the rumour persisted that there is still some truth in those stories.

Then I read that an Englishman had been able to take a photograph of the rope trick. The negative revealed no rope at all, but the Indian sitting in the middle of a circle formed by the onlookers, and his eyes closed. Whether this report is true or not, the opinion was soon formed that we had here a performance of mass suggestion, such as has been shown on the stage of many European towns by men who could hypnotize other people. For the unbelieving Westerner the riddle was solved: mass hypnosis. We didn't stop to think that the riddle was not solved at all, that we had only given a name to something, which was more mysterious than anything we heard before. But as usual - finding a name, means having explained it. We didn't even think of the fact, that an Indian, who could not speak the languages of the hypnotized people (so important for any hypnotizer) could - without words - make people of different countries, of different "make-up" see the same thing.

Having declared the matter as being mass hypnosis (of which we still don't know anything) we gladly believed that all those performances with daggers, swords and needles were not real, at all, but mass hypnosis again.

And with ^{this} the matter rested - as far as I can see - with most people of the West, including any of my acquaintances. With me, however, the matter is different. I have been in the East, if not in India, at least in China, or in the most americanized or westernized town of China; Shanghai. These were ^{the} most fascinating 6 years of my life. Making a living as a photographer and moviemaker I was constantly on the look-out for unusual happenings, and therefore I came across things, of which the Shanghai resident may have heard but never bothered to attempt the tedious journey into disreputable suburbs to see for himself.

I found the Chinese men and women ^{to be} just like European people. They are exposed to all the ills and afflictions of the human body. They will cry if they feel the prick of a needle, or if they cut themselves with a sharp instrument. They will moan and yell in torment of physical pain, in short, they will behave like ordinary people.

But sometimes a great procession is arranged to honour a special deity. Great altars are erected in some streets through which the procession proceeds and all the people who pass the altars will bow in deep reverence. And amid the procession they will come. Not fakirs or yogis, not wise men or hermits or men with the look of another world in their burning eyes, but ordinary people, with most ordinary faces, smiling and even boys and girls. But to look at them, you need ^{to} some strong nerves.

Their upper arm was pierced by many needles and hooks which penetrated the flesh below the bone. On these needles and hooks there were suspended weights. A brick weighing a few pounds for the boys and girl up to terrific large metal vases such as you see on altars in the Far East, ^{carried by grown-ups} the biggest must ^{have} weigh ^{ed} perhaps up to two hundred-weights. And these enormous weights exerted a terrible pull on the flesh, which was accordingly drawn out to 6 or 8 inches or even longer. The men held their arm outstretched above the terrible weight, but as this would have been impossible during the hours of the procession, a second man supported the fist of the outstretched arm of the performer. However, with the bigger weights even this was not enough. The hand of the performer was tied to a long bamboo pole with two bearers on both ends, carrying the pole on their shoulders. Between the pole and the performer was his outstretched arm and below it on the hooks in the flesh hung the large metal vase.

However, on various points in the procession the performers were able to heighten their feat by dispensing with the help of the bearers which supported their fist. When they arrived before one of the many altars, the performer and the bearers bowed three times in deep reverence. Then the bamboo pole was taken away, and the performer showed the "superhuman" feat of holding the weight with his outstretched arm, and then outdoing even this, started to rotate around his axis, the heavy weight gathering momentum at each rotation. The flesh must have been strained to breaking point; all in all an impossible feat (for ordinary human beings).

But they were ordinary human beings, and I could convince myself that the terrific weight was real, and so were the needles and hooks, the piercing of the flesh and the drawing out of human tissue. I touched everything and in dashing in and out of the procession with my madly racing movie camera I found the performers and their helpers most co-operative. In fact, they felt very much honoured that I should take a picture of them and their feat. They even smiled and when the picture was taken went on. But not all of them smiled. The faces of some were contorted in obvious pain, blood trickled from their wounds, and one could almost feel their "superhuman" effort to carry on.

I have the film still with me, and it helps me to convince people, who otherwise would think that I brag with another impossible story from the Far East.

In the meantime, the Western people have come to realize that such extraordinary feats of the human soul over his body are real. Hundreds of War Correspondents have been in India and the Far East and have taken similar pictures. The most dignified pictorial magazines have brought picture series of Eastern people who pierce their bodies with knives and needles, swallow nails, walk over burning coals and do other incredible feats which must convince anybody that the mind of man is capable of an extraordinary will power, which could defy all our ordinary natural laws of physiology, anatomy, physics, etc. and which must convince us that the laws of nature could be modified by something to which "in a higher sense" we may give the name of spirit.

One thing seems to be sure. These extraordinary feats can only be performed under a strong religious emotion, a strong belief, which could "shift mountains". Last year, there appeared a picture series in LIFE magazine of a Swiss man, who performed similar hair-rising piercings of his body before learned men. He was no fakir, no yogi, no philosopher, no hermit, but he too, spoke of his message and of his beliefs, which he could not explain in simple words. Similarly the people in China which I photographed were simple people, but they undertook the mutilations and exertions in a deeply religious spirit, which enabled them to perform the impossible.

I for one, was therefore not in the least surprised, when I read Julian Huxley's words in his program for UNESCO (see p. 219) in which he demanded "the study of unusual and at the moment, scientifically inexplicable properties of the human mind", and in which he simply stated that recent experiments have "established the reality of ^{some} degree not only of extra-sensory knowledge, but of pre-cognition."

Imagine "pre-cognition". The human mind is able to anticipate future events, to prophesize, to tell what is going to happen to a person at a distance. And this is not said by a learned man, who profess to be a spiritualist, or a faithful believer, but by Julian Huxley, professor of biology, grandson of Thomas Huxley, defender of Darwin's theory of evolution.

Alexis Carrel, the famous Nobel prize winner, has devoted a large part of his widely known book "Man, the Unknown" to the mental activities of man. As Carrel was a medical

man, a doctor and a biologist. He worked on the so-called "mechanical heart", showing that a human organ could "live" even separated from the parent body for indefinite periods.

In the following paragraphs I shall quote a few lines from the Penguin Books edition of "Man, the Unknown" (Pelican Book A 181) dealing with the same subject, the power of the mind over the body.

Carrel writes:

"Most of the great mystics have endured physiological and mental suffering, at least during a part of their life. Moreover, contemplation may be accompanied by nervous phenomena resembling those of hysteria and clairvoyance. In the history of the saints one reads descriptions of ecstasies, thought transmission, visions of events happening at a distance, and even levitations. According to the testimony of their companions, several of the Christian mystics have manifested this strange phenomenon. The subject absorbed in his prayer, totally unconscious of the outside world, gently rises above the ground. But it has not been possible so far to bring these extraordinary facts into the field of scientific observation." (see footnote)

"Certain spiritual activities may cause anatomical as well as functional modifications of the tissues and the organs. These organic phenomena are observed in various circumstances, among them being the state of prayer. Prayer should be understood, not as a mere mechanical recitation of formulas, but as a mystical elevation, an absorption of consciousness in the contemplation of a principle both permeating and transcending our world. Such a psychological state is not intellectual. It is incomprehensible to philosophers and scientists, and inaccessible to them. But the simple seem to feel God as easily as the heat of the sun or the kindness of a friend. The prayer which is followed by organic effects is of a special nature. First, it is entirely disinterested. Man offers himself to God. He stands before Him like the canvas before the painter or the marble before the sculptor. At the same time, he asks for His grace, exposes his needs and those of his brothers in suffering. Generally, the patient who is cured is not praying for himself, but for another. Such a type of prayer demands complete renunciation - that is, a higher form of asceticism. The modest, the ignorant, and the poor are more capable of this self-denial than the rich and the intellectual. When it possesses such characteristics, prayer may set in motion a strange phenomenon, the miracle.

In all countries, at all times, people have believed in the existence of miracles, in the more or less healing of the sick at places of pilgrimage, at certain sanctuaries. But after the great impetus of science during the nineteenth century such belief completely disappeared. It was generally admitted, not only that miracles did not exist, but that they could not exist. As the laws of thermodynamics make perpetual motion impossible, physiological laws oppose miracles. Such is still the attitude of most physiologists and physicians. However, in view of the facts observed during the last fifty years this attitude cannot be sustained. The most important cases of miraculous healing have been recorded by the Medical Bureau of Lourdes. Our present conception of the influence of prayer upon pathological lesions is based upon the observation of patients who have been cured almost instantaneously of various affections, such as peritoneal tuberculosis, cold abscesses, osteitis, suppurating wounds, lupus, cancer, etc. The process of healing changes little from one individual to another. Often, an acute pain. Then a sudden sensation of being cured. In a few seconds, a few minutes, at the most a few hours, wounds are cicatrized, pathological symptoms disappear, appetite returns. Sometimes functional disorders vanish before the anatomical lesions are repaired. The skeletal deformations of Pott's

Footnote: Just yesterday (April 17, 1949) I found an article by W.R. Marr in the Sydney Morning Herald about Aldous Huxley (the brother of Julian), Gerard Heard and Christopher Isherwood, who "have gone Vedanta", a new religion, branch of Hinduism and practised in a temple in Los Angeles. In his introduction to "Vedanta for the Western World" Christopher Isherwood describes "samadhi":

"It is supposed to be a fourth kind of consciousness. It is beyond the states of waking, dreaming or dreamless sleep. Those who have witnessed it as an external phenomenon say the experiencer appeared to have fallen into a kind of trance. The hair of the head and body stood erect. The half-closed eyes became fixed. Sometimes there was an astonishing loss of weight and even levitation from the ground."

disease; the cancerous glands, may still persist two or three days after the healing of the main lesions. The miracle is chiefly characterized by an extreme acceleration of the processes of organic repair. There is no doubt that the rate of cicatrization of the anatomical defects is much greater than the normal one. The only condition indispensable to the occurrence of the phenomenon is prayer. But there is no need for the patient himself to pray, or even to have any religious faith. It is sufficient that some one around him be in a state of prayer. Such facts are of profound significance. They show the reality of certain relations, of still unknown nature, between psychological and organic processes. They prove the objective importance of the spiritual activities, which hygienists, physicians, educators, and sociologists have almost always neglected to study. They open to man a new world."

This lengthy quotation of Carrel and the explanations given in the foregoing pages have only one purpose, namely, to show that we can make our simple symbol^{stand} for the human mind and his actions^{and} for any meaning connected with the powers of the human mind and its manifestations, including mysticism. It is not necessary to evolve a special symbol for the mind activities, described in the foregoing paragraphs, simply because we have no special symbol (term) in our ordinary languages for them. We call them extra-sensory, extraordinary abilities of the human mind, brain, soul, spirit, etc. etc. But it is easy to evolve special symbols as we shall soon see.

In any case, all the above discussed phenomena originate in the human brain, if we do not take into account for the moment, outside influences. If the human brain receives a heavy knock and relapses into unconsciousness, any of such activities cease, at least the victim does not become aware of them. We can therefore trace back any meaning referring to thought, intelligence, wisdom, conscience, clair-voyance, pre-cognition, etc., etc. to the human brain and any special symbolization of such meanings would include^{the} the outline of the brain symbol.

However, as said already in foregoing chapters, there exists an intelligence, a wisdom, a foresight, an ability, a skill very much exceeding human intelligence, human wisdom, human foresight, abilities and skill; which we cannot trace back to the human brain. We find it in the atoms and molecules of living cells, and even the 30,000 times magnification of the electron microscope fails to show us any special spot in these cells from which this wisdom and skill emanates, and which does for the cell what the brain does for the human being.

The biologists study the behaviour of living cells under the microscope and marvel at their ability to cope with the various conditions imposed upon them; and their reaction in cases of emergency. But more wondrous than anything is the co-operation of cells in a highly complex organism such as the body of an insect, a fish, a bird, an animal or a human being. Here we find a harmony in the interactions of every single cell for the common good of the whole society of cells. There is the heart, a special system of cells, functioning as a pump^{and} working with an efficiency never attained by any mechanical pump ever devised by man. It weighs about ten ounces only, and it works day and night pumping the amount of about one gallon of blood which a human body holds, round and round through all the tiny channels - equal to a pumping of 900,000 gallons a year.

And the blood stream itself - a mighty river which contains the most complicated chemicals, manufactured in special organs, and sent on their way throughout the miles of channels, where they are picked up by the various cells, which discharge in turn their refuse. This is promptly carried back into the special factories, where it is transformed or rejuvenated to do again duty.

Then there are the other organs, one of the most marvellous of them is the eye, which the tiny cells miraculously manufactured according to the laws of optics, photography and - Heaven knows what other laws are enacted to produce a picture through lens, retina and brain. And there is the tiny iris, which every amateur photographer knows from his camera and from his over and underexposed pictures, (when he forgot to adjust the opening to the amount of light) In the human eye, the iris is worked automatically, closes and opens itself, according to the light amount - how the tiny cells know what to do, this is such a miracle, that we have ceased to ask the question, because we know that we don't know and that our discoveries of tiny links of reactions don't give us an answer as to the ultimate "laws" under which these marvellous cells perform their "duty".

However miraculous this organisation, this co-operation of single cells may seem, the miracle is heightened if we observe their actions in an emergency. You may hurt your arm (for instance) in many ways. You may cut it with a sharp instrument, you may prick it with a needle, you may infect it with various different germs, you may burn a portion of it, you may hit the arm and burst some blood vessels under the skin, you may even break the bone or you may do harm in many other different ways. In each different case of emergency the cells of your body will act differently, manufacture different chemicals, bring different cells into action to ^{damage} combat or intruders, and to counteract their poison and their harmful influence. Millions of cells in the blood will rush to the scene of battle and will virtually give their lives in an heroic onslaught.

Once the enemy is expelled, other cells will arrive and start the re-building. They will repair the cut tissue and the broken bone, they will manufacture new cells, until your skin is smooth and soft again, until new hair is growing again on the same spot and your bones strong and straight again.

And the cells will display this skill, intelligence, wisdom and abilities without directions from the brain. They will do it even when you are unconscious, and they will do it even in a human being, whose brain is in total disorder. And their brother cells and sister cells which form animals, birds, fish, insects and less highly organised creatures will do it likewise. As we cannot discover the source of this intelligence, we must assume a higher intelligence, under which these tiny cells are acting, and if we deny this outside intelligence, we must take refuge in all kind of theories, composed of words with meanings of which we know nothing. Most baffling of all phenomena is the creation of new life out of a tiny cluster of cells, and each of us who observed a little baby complete with its tiny arms and hands, finger and nails, mouth and nose, ears and perfect eyes, must feel that there is a force at work in this universe of ours of which we know nothing. As usual, we have given a name to it: Creation.

And this brings us to our symbol for Creation. As this symbol should comprise Creation as a whole, it cannot be anything else than wholly arbitrary, and you will soon know why I have chosen the equal-sided triangle to stand for Creation



Creation, Nature
the All, the Universe

This symbol conforms to our grammar rules of semantography and it can consequently be used with the 3 indicators on top to denote the 3 main meanings.



the Matter
created



the Actions
of creating

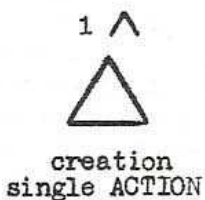


creative
(adjective)

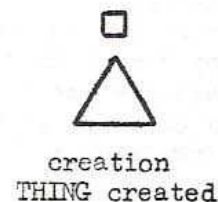
For our ordinary every-day language we shall use these symbols not for the whole cases of Creation (which we could, if necessary denote by adding the all symbol) but for single

The inconsistency with regard to the first matter symbol (for which we have no word in our language) disappears when we realize that the words creation, to create, creating, refer actually to an ACTION only, just as the words selection, to select, selecting do. The reader is asked kindly to peruse the chapters on p.192 and 221 where it is shown that the matter transformed by an action takes on the name of the action. After the selection, the THINGS selected take on the name of selection. Sometimes however, the ending is different. After the mixing is done, the THINGS mixed take on the name of mixture.

In the same way the creation of a THING is an ACTION, and after the ACTION is performed we have before us the THING created, the creation. This refers to any single act of creation, be it an amoeba, a baby, a monument or a bridge. They are all single creations. According to our grammar rules explained on pp.192 and 221 we have derived the following indicator combinations:



or simply



This grammatical treatment is not inconsistent with modern physics. We know today that incessant ACTION is going on within every piece of matter, within every single atom. More than that, modern physicists (see p. 212 ff) are of the opinion that matter itself is nothing else but a manifestation of energy, of action. We may even derive our symbol for creation from our symbol for ACTION



Action



Creation

Now, you may dismiss this derivation as a play with lines. I agree with you. But just think ^{happened} what some 2500 years ago, one of the greatest wonders of history, the blossoming of Greek culture, not surpassed yet. The Greek mathematicians were enraptured by geometrical constellations, such as the equal-sided triangle. For them, it disclosed divine beauty, order and harmony, and ^{some} modern mathematician think somewhat likewise.

The above derivation in the symbols for Action (Energy) and Creation (Universe) may seem playful, but it adds just a little excitement to our symbols, and make them more meaningful. We can even extend this play with our symbols and find a meaningful analogy in other symbols. Our symbol for male and female human being show at first glance an upright human being, wearing either trousers (male) or a skirt (female). However modern woman's fashion has already dispensed with this distinction. In fact, I had a quite different idea in mind when I devised these symbols



male



female

For the man, action, endeavour, effort, success are essential. This makes life worth living. The symbol for action and energy is therefore displayed in the symbol for man.

For the woman the main task in life is to be the trustee of Creation. Within herself the miracle of creation takes place. Out of a tiny cluster of cells, nourished by her blood, built by her tissues, grows a new human being. The symbol for Creation is therefore displayed in the symbol for woman.

You may again say, that this is only a play with geometrical lines, to which we attach special meanings. I agree with you. But this procedure is the basical procedure of poetry, with the exception, that we deal there with sounds expressed by phonetic letters and therefore different with different languages. With ideographic symbols however, such as the Chinese characters, we attain an universality, bridging all languages. Prof. Fenollosa pointed out (31): "I believe that the Chinese written language has absorbed the poetic substance of nature... and has through its very pictorial visibility, been able to retain its original creative poetry with far more vigor and vividness than any phonetic tongue."

If we come to think of, we need deperately a dash of poetry, especially in this chapter, where we deal with the most miraculous meanings of our world. So far, only the poets have been able to express in words the mysteries of this Universe, which were revealed to their sensitive souls in flashes of enlightenment.

As said on the foregoing page, the grammatical treatment (based on chemistry and physics) in placing the matter (THING) indicator on top of the symbol for creation indicates clearly transformation of matter through the action (energy) of the creative force.

In other words, this conforms with what we observe in nature: the incessant change in matter, the creation of new forms of matter from other forms, new life from decaying life.

We can therefore avoid the fruitless question as to the beginning of all THINGS, or the Creation of the Universe "out of nothing". To these questions we shall probably never get any answer. We deal with reality when we use our symbol to stand for the incessant creation which is going on before our eyes. We may use this symbol to stand not only for the creation of new life, but also for the incessant creation going on in the depths of every atom, acting and reacting with other electrons, protons, neutrons of other atoms.

But we may use the very same symbol in a poetical way to indicate the creation of a poem or a symphony. For the every-day making of tools, ^{and} things we need in life and ^{for} other activities (although creative too) we may use a diminutive symbol, a minimized symbol resembling the triangle, but on a lower scale. It should stand for the every-day meaning of to make, somewhat different from to create. You will find this symbol on p. 334.

The meaning of Creation is even more diversified as the meaning of Spirit which we discussed at length on previous pages in this chapter. And it is now necessary to show that our symbol for Creation can be interpreted in the various ways in which we treat the phonetic symbol C-r-e-a-t-i-o-n.

"Creation?", might people ask, "what do you mean by this term, or by your symbol. The Creation by a personal Creator according to the old-fashioned Bible story or Creation according to the new theories, which modern science has evolved?"

Here again, I beg to be allowed to relate an experience from my life. I was brought up by my parents in the belief of a personal Creator, of a high Being, who has created this world and keeps it going. Most children are brought up this way. The simple mind of children cannot grasp an explanation that all this came just "by itself", and it keeps going just "by itself".

In the years of adolescence we come across many instances of gross injustice, of suffering by innocent people, and the crooks and evildoers being able "to get away with it". Our belief in a just God, who punishes the wicked and rewards the righteous is badly shaken. Then we learn in school that the stories of Creation related in the Bible cannot be true, in fact must be rejected on the basis of the modern theories of chemistry, physics, astronomy and the theory of evolution. Then we discard the whole Bible and the idea of a Creator. We cannot find Him with the telescope and the microscope. He does not exist.

This is the usual course of any young person, who becomes an atheist. And with me - a boy with an immense interest in the natural sciences - it was not different. Being the son of a mechanic and electrician, I had in my father's workshop all physical and electrical appliances to play with, and in addition I made our home a chemical laboratory to the despair of my mother, who however with motherly kindness let me continue. As I had the best marks in chemistry and physics, my career was clearly mapped out for me: the technical university, department chemical engineering.

I graduated and was immediately engaged by a firm, making electric lamps and other appliances. However, the making of practical things did not satisfy me. Somehow I felt that there is a message to be derived from the knowledge of the laws of nature. I saw around me men and women, who made life miserable for themselves and for others, because they let themselves be guided by all kind of silly superstitions. I began to believe, that people trained in the laws of causation could make a better life for themselves and for others. I felt, that it must be necessary to show people that there is a cause to every effect and there is an exact method, the scientific method, to find the correct cause for every effect. It was clear for everyone to see, and the great advances in technology and even more, the great achievements of medicine, based on the experimental sciences of chemistry and physics, were the best proofs of the superiority of modern science over religious theories. And so I set out to preach the new gospel.

However, I realised that religion is a very private and very personal affair, and consequently I refrained strictly from any mentioning or referring to religion in all of my lectures. For the last 25 years I lectured to working class people mostly, in educational halls, people's universities, night schools and evening classes. After a heavy day's work in the factory I travelled to those evening schools and conducted classes without any material gain. I lectured on physical and chemical phenomena. There was so much to explain. The new atom theory was taking shape. The ^{picture} that each atom is itself a solar system with a sun and planets circling round and round, was wonderful to behold. The new theory of Einstein aroused great interest, and everyone wanted to grasp and to understand all these wonderful discoveries.

I had to evolve a special lecturing technique. As a student, I attended many science lectures, and very often I came out dumbfounded and downhearted. I had not understood the lecture and felt very ignorant indeed. With a vengeance I set out to discover what that lecturer failed to convey to me, and usually I found that the matter was simply to grasp, when told in simple language. This was my first discovery about science and the language in which it is taught.

I realized that the lecturer uses a different language ^{the language of} from his audience. He could have as well spoken in Greek, the effect would be the same: the audience politely applauding ~~or~~ oratory performance, and then shuffling out, pretending to their friends that they understood, but feeling that they have not.

In the factory I came in intimate contact with many skilled men, electricians, mechanics, plumbers and others, willing to learn, interested in science, but feeling that somehow science is beyond their grasp and that their mental faculties are too limited for it.

So I set out to teach science and the most modern advances of science to the simple people. Gradually I improved my methods, until I could give uneducated people a grasp of the works of modern scientists, including the relativity and atom theory. My rewards were very great, when many from the audience came forward to thank me and to tell me, that they believed never to be able to grasp all this.

As said before, it was just a matter of language, of using the words which those people understood, of refraining from using the scientific nomenclature, expressed in Greek and Latin terms, which ordinary people don't understand. Moreover, I tried to explain every word in science by referring to experiences of the ordinary people. "What are electro-magnetic waves?" I asked. "Well, it's simple. You know what electricity is; that what makes a motor run and a lamp glow. You know what magnetism is; you have seen nails being attracted by a magnet. Well, that's magnetism. And you know what waves are. You have seen the ripples and waves on a lake. So, electro-magnetic waves are just waves of electricity and magnetism. We can't see them, but they are there, just the same and we can pick them up with special apparatuses. This is how radio works."

Well, it was as simple as that, and the audience seemed to understand. But slowly the thought began coming ^{in me} up that I was deceived myself and that I deceived the others - again by language. Now, having studied semantics, I know where the fallacy lies. I used words and believed that by using these words I understood and made the others understand. The old fallacy: using a ^{descriptive} term as an explanation. What is gravitation? Oh, that's what makes a stone fall. And what makes a stone fall? Well, gravitation. Explaining one word by another, and using the IS to give this explanation some sort of reality. If radio IS a manifestation of electro-magnetic waves, what other explanation do you want? Nobody bothered to ask what electro-magnetic waves really ARE.

This semantic fallacy still reigns with many intellectuals. Only a few had the courage to stand up and confess our total ignorance about ^{mysteries named with} all those new tangled words, which the scientists have invented. As J.S. Mill remarked:

"Explaining one law of nature by another is but substituting one mystery for another, and does nothing but render the whole cause of nature mysterious."

A.S. Eddington was even more outspoken (50). What he said has even more value because of the fact, that he abandoned the language of science and used the language of the ordinary people. He said:

"...something unknown that makes the electron do something we know not what..."

And now think of the fact, that today modern scientists believe that the electron does not exist at all. The term electron is only a name for "something we know not what." No wonder, that many clergymen today refer in their sermons to the miraculous workings of atoms and electrons and do not forget to point out that modern science has failed to give an answer ^{as} to the ultimate nature of the world. It's even "worse." The most modern advances of science point more and more to the existence of a supreme intelligence and the most modern scientist "is astonished to notice" as Einstein put it, "that sublime order emerges from what appeared to be chaos."

Yes, the era which started about 1850 has definitely come to an end about 1925. This was the time, when people believed to be able to explain the whole universe "quite natural". It all came just "by itself". There are no miracles in the world, there was no Creation and consequently there is no Creator.

Again language was put to work. On page 582 we have learned that the word creation is an ACTION word, just as the word selection is. Consequently we could trace the ACTION to some THING, which performs this ACTION. If we could form the word selector, we could also form the word creator. The word creation was therefore a very inconvenient word in the atheist terminology, and it was abandoned in favour of a much better word: Nature. The advantage of this word is that it does not directly indicate an ACTION, and therefore there is no such THING as a Naturor or Naturer. In using the word Nature the atheist had done away very effectively with the idea of a Creator, and he did not bother to think that he had substituted another word with a meaning even more mysterious.

But it did not work. The word Nature indicates in some very vague way not only the THINGS in our universe but also their ACTIONS. So it is somehow an ACTION word and laymen and scientists used it in this way. Many explanations started with the words: "Nature does this" or "Nature does not that". Instead of a Creator, there was that Being "Nature" which now did all the things. Perhaps the "Goddess of Reason" of the French revolution is responsible for the female character of "she" Nature.

In my atheist days I came across a saying of a British scientist, whose name I unfortunately forgot. I attended a lecture of a Dutch biologist, who had performed some very interesting experiments with plants. He was able to find out how and why plants turn towards the sun, that means, he found out something about the "mechanism", without of course being able to explain the How and the Why plants are able to manufacture certain chemicals which perform the miracle. And he ended his lecture with the following quotation of the British scientist:

"Nature has kindled a light, the human brain, to disclose little by little her secrets"

This quotation simply enraptured me. It took my breath away. It satisfied my inner craving, my religious feelings, which had been effectively held back by modern science. Somehow Nature became for me that supreme Being, which keeps the universe going.

After that, I imitated the Dutch biologist and closed most of my science lectures with the above quotation, and I could see that it satisfied the audience too. Now, studying the working of language, I realize that I and the many scientists and laymen have used a convenient word as a substitute for ^{the meaning of} God, or Creator.

This belief in "Nature" is still widespread among most intellectuals, who think that it is the "progressive" view. Stuart Chase, the author of the famous book on Semantics "The Tyranny of Words" (26) expresses his bewilderment about the fact, that modern scientists like Eddington, Millican, Jeans and others, use the term God and Creator. Apparently for Chase, the reformer, these words have meanings associated with so many instances of injustice and sufferings that we better forget them. Needless to say, that what Chase understands by the term God is a different meaning from what Eddington and others understand by it. In fact, you and me and anyone of this planet may have just a different idea about the meaning of God and Creator.

Now, our word creation has two meanings (at least). The first meaning refers to a creation out of nothing. The second meaning to a creation out of something. The first refers to the begin of the universe, the second to the incessant creation which is going on in the universe.

It is understandable that we human beings ^{try to} conceive a very first beginning of our universe out of the void. On the other hand, we realize that logical reasoning does not get us far, and so atheist scientists and laymen have abandoned the futile question as to the beginning of Creation, to which the faithful believer has such a simple answer.

We take this universe of ours for granted. It exists, and we see our task in the exploration of it, in the discovery of its mechanism. However, no matter how atheistic we set about our task, no matter how fervently we discard the belief in a Creator, we can't help making wild assumptions, which are little different from the dogmas, in which the faithful believer believes, and on which he builds up his universe. We believed for instance that the amount of matter in our universe is fixed. There are only so many little atom balls in the universe, and they toss around, forming all kind of constellations, just like billiard balls on a billiard table.

We have no proof for this dogma, in fact we shall never be able to prove it. So we believe in it. For the alternative is very inconvenient for our atheist attitude, namely the assumption that little balls are created out of nothing. In the meantime, we have come

to believe that according to certain experiments and assumptions, matter can be created out of energy. Fortunately, we had made another unproved assumption, namely, that the total amount of energy in the universe is fixed, and so we have amalgamated the law of the conservation of energy with the law of the conservation of matter to a new dogma, unproved but fervently believed, because it relieved us of the uncomfortable thought that some new creation might be going on.

Nevertheless, new creation is going on all the time, but, we have assured ourselves, that this is only a transformation of matter. But it is a very miraculous one. The theory, that the amount of little balls and the energy which pushes them around is fixed in the universe helps us to a convenient understanding of the incessant changes which go on in so-called inanimated matter. Various atoms are per chance brought into contact with each other, react in different ways, to form new combinations, which in turn react with other combinations, etc. etc.

But this explanation does not explain the creation of animated or living matter. Before our eyes, tiny clusters of cells, divide, double and multiply and grow into the most complex and most miraculous organisms, insects, birds, fish, animals and human beings. And these beings in turn can produce miraculously new organisms. From foregoing paragraphs we have learned that those conglomerations of living cells in highly developed organisms do not come together by mere chance but are composed, and act and react in a most intelligent way, a phenomenon ^{so many people maintained} which can only be explained by the acting of a supreme intelligence, which conducts the behaviour and life of those atoms and cells. Here at least is the proof of a creation, apparently influenced by an intelligent Creator.

It came therefore as a relief to those who wanted to see the edifice of religious thought and teaching destroyed, when Darwin published his famous theories. Now, at last was the last pillar of religious superstition broken. There is no God, there is no Creation as told in the Bible. Everything happened quite accidentally, just "by itself" without any outside intelligence whatsoever. And sure enough, ^{descriptive} a new word was coined to account (and by the way "explain") this phenomenon: Evolution. And having coined the new word, many people believed that the phenomenon has been explained. This new superstition is today believed by millions of so-called intellectuals, and is fostered by those, who combat the influence of religious leaders. No wonder, that in modern Russia, Darwin and his teachings have been lifted up to almost religious status.

Eric Ashby writes in "Scientist in Russia" (Pelican Book A 186, 1947, see quotations on p. 573ff):

"Darwin's writings have (in the words of Hudson and Richens) been erected to the status of a canon. By Darwinism we in Britain and Lysenko in Russia mean quite different things. We retain those parts of Darwin's work, which have withstood eighty years of criticism, and we forget the rest. But for the disciples of the 'new genetics' Darwin's work is sacrosanct. Even the most tentative views must be accepted as literal, true, and final, in the way that a fundamentalist accepts the story of the fall."

The trouble with Darwin was - to use a witticism of G.B.S. - that he was no Darwinian. Contrary to the belief of millions of intellectual atheists, Darwin was a religious man. He did not believe that he had done away with the Creator and had solved the mystery of life. In the last sentences of his "Origin of Species" he said:

"There is grandeur in this view of life, with its several powers, having been originally breathed by the Creator into a few forms or into one; and that, while this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been and are being evolved."

For the Darwinians, however, Darwin has done away effectively with a Creator, and if you ask one of them how all those creatures came into being, he will give you one word as a sufficient explanation: Evolution. We simply do not realize that ^{firstly} this word is no explanation at all, and secondly that it implies an even greater miracle as the miracle of Creation by an omnipotent Creator. It is simple to understand a theory according to which a power, or force, or supernatural being - in short, a Creator had created all those marvelous forms of life. But a theory according to which atoms and molecules in utter chaos assembled themselves purposeless into the most purposeful organisations - only people who abandon all reasoning, could believe in such a theory. I myself confess that I too fell into the trap of the mechanistic hypothesis. It's all so simple. When the waters receded, the fish simply grew legs and continued on land. Then they manufactured lungs. Then they shed their scales and made themselves hard armours, or skins or furs according to

season, climate or fashion. But we know that the fish are dumb. So are the reptiles, so are the animals. They couldn't do it just "by themselves". Even we human beings, who can make all kind of tools, are in this matter as helpless as the lower creatures. If we eat a piece of meat, or bread or fruit, we cannot direct our body to manufacture from this a tooth, or a nail or a few hairs. You have to be a chemist to know about the complex chemical structure of a tooth or a nail or a hair, and to realize that - if the cells of our body are able to manufacture these complex and most purposeful things, then they must be imbued with an intelligence and a skill, infinitely greater than "human intelligence and skill" (attributed to originate in the human brain).

We have become used to laugh about human errors, superstitions and theories of the past few thousand years, and we feel very elated of living in our enlightened age. But later generations may judge our present century very harshly. Not so only on account of the crimes committed, but also on account of the fact that we of the 19th and 20th century accepted or swallowed the ridiculous theory that the universe is utter chaos and without purpose, and that purposeful organisation has evolved just by itself without purpose, simply by the hit or miss chance. To illustrate this senselessness of the mechanistic hypothesis, we may perhaps^{say} as follows: Let us assume the chaos of the hardened crust of the earth. The time is many hundreds of millions of years back. Then out of mere chance some minerals come together, containing iron, copper, zinc, etc. Then again by mere chance some carbon happens to be around, or is added some millions of years later. Then some fire flares up and by mere chance iron is produced, and steel and copper and zinc, and brass is formed. Millions of years later by the mere chance of probability little cog-wheels and springs, and axles and frames are formed, and little by little as the millions of years pass by, some of these axles and cogwheels assemble themselves into a watch and then some prehistoric earthquake gives the initial shake and our little watch is set in motion and there it is - created just by itself, just by the mechanistic evolution.

Silly as this analogy may seem, the silliness goes further. Our atheistic mechanists do not only assume that the watch has formed itself, without the assistance or presence of some purposeful intelligence, they went on to assume that our little watch, in order to cope with the existing conditions has developed sturdier wheels, stronger frames - in short, the fittest watches survived - ^{and, also that} the molecules which form the watch, have learnt to repair broken wheels, to grow new cogs - and to top it all - the molecules have, by the mere hit or miss process, hit on a grand thing, namely, watches split up in half and out of the halves two new complete watches grow, and go on ticktacking and producing new watches out of themselves. Later on, male and female watches mate and produce new watches which grow to maturity. In the end, by mere chaotic chance all kind of species are created, small wrist watches, mantelpiece watches and big grandfather clocks - and all this evolution takes place just purposeless - it's chaos all right. (see Paley quot. page 624)

What has happened was that the Darwinians had outdarwin'd Darwin himself. In their iconoclastic fervour they have "thrown out the baby with the bath". In denying any purposeful intelligence in the universe, they have denied their own intelligence. There is no Creator, no God, the universe is chaos, and we are the product of chaos.

Yes, we shall become the laughing stock of later generations who would have no difficulty to find a related link between our views and our concentration camps, our slave labour camps and our gas chambers for genocide. In chaos - only the fittest can survive.

Fortunately however, there are other voices, and the future historian, who will study one day our contemporary writing, will surely come across them. As pointed out in foregoing chapters and paragraphs modern scientists have come to acknowledge that there is a supreme intelligence in the working of the atoms and the chromosomes, and supreme order emerges where formerly we thought only chaos to be.

I could have written this chapter in a very different way. In fact, I could have facilitated this difficult writing by going^{on} quoting the sayings of great scientists and philosophers. Instead of displaying a string of quotations, I have used my own words, to express in a very crude and naive form my own thoughts about this problem, being well aware of the fact, that the great men of literature and poetry have said the same in many different ways, a thousand times better than I did it. To finish this line of arguments let me bring forward only 2 examples out of the immense variety of life to support my views on the meaning of evolution.

Somehow, we have come to accept the miracles around us as common-place things. We do not marvel when we put a few grains of seed into the ground, and see them bursting out

into the most beautiful and wondrous flowers. A tiny mouse is for us a nuisance, a pest. Yet Walt Whitman said that "a mouse is miracle enough to stagger sextillions of infidels." But, we have lost the sense of seeing a miracle in a mouse. But sometimes, the scientists discover new miracles, and then - for a very short time - we wonder in amazement. And what I am going to tell now, has something to do with a mouse, or better a flying mouse, a bat.

For thousands of years men have wondered how bats can fly in pitch darkness without bumping into obstacles. About 150 years ago Spallanzani tried out some experiments. He stretched fine threads across a room, which could be made completely lighttight. Then he released in this pitch darkness a bat. But the bat did not hit the threads, nor did it bump into the wall or other things in the room. It flew around avoiding all obstacles. In assuming that the bat's eyes could penetrate the darkness, Spallanzani covered the eyes of his bat, and let it lose blindfolded. But again, the bat did not hit anything. So it is not the eyes, which guide a bat, but something else. Spallanzani then covered the ears, and now the bat did not want to fly at all, and when thrown into the air, it bumped into the threads and into the walls. Spallanzani then concluded that bats can make their way in complete darkness, can avoid any obstacles with the use of their ears - but how they did it, this remained a complete mystery - until now.

Now we have radar (radio echos) and sonar (sound underwater echos) and according to Hartridge, Griffin and Galambos the mystery of the bat is solved. The bat uses a kind of radar. With its tiny mouth it emits short squeaks. The frequency of these squeaks is above the 30,000 mark and therefore in the supersonic range, inaudible for our ears. These tiny high frequency sound waves are emitted from the bat's transmitter, the mouth, and travel forth and bounce back, when they hit an obstacle. Coming back as echo, they are picked up by the receiver, the tiny ear. And so the bat flies in pitch darkness, and on the tiny radar screen in its brain, it somehow sees the radar pictures of the trees, branches, walls and obstacles, in somehow the same way as a flier watches the radar screen in his airplane.

It is difficult to believe that this wonderful mechanism came about by mere chaotic chance. But the miracle is even greater. In our radar apparatuses the short signals are emitted in intervals, and during the silent intervals the receiver picks up the echo. When the bat emits squeaks with its mouth, these squeaks would be immediately heard by the bat's ears, and the bat might confuse the signal and its echo. To avoid this, a tiny muscle operates, which shuts off the ear during the squeak, and opens it to receive the echo.

But the miracle goes even further. In a cave filled with hundreds of bats, there must be a terrific din of squeaks and a terrific mix-up of echos. But no - each bat has its own and personal frequency band, each bat transmits and receives on a different wavelength.

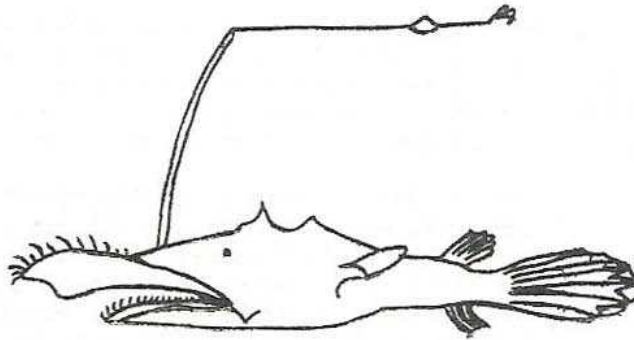
But the miracle is not yet fully told. The bat, in flying in the dark night, will easily avoid the trunk of a tree, or a branch or a fence, or a wire. But if an insect, a spider, or a fly sits on that trunk, or branch, fence or wire, then the bat makes straight for it and grabs it. Apparently, the radar screen in his little brain is so perfect, that it outlines in precision a spider or another insect, against the trunk or branch. Miracle upon miracle.

It is difficult or even impossible to imagine that, according to our theories, a particular species of flying mice has been forced by circumstances to live in caves and to fly at night, and then being forced by the alternative either to survive by evolving new faculties or to die out, they have evolved their own radar system. Surely, the bats couldn't have done it themselves, so their molecules and cells must have done the thinking and constructing. If we deny an intellectual force at work, and assume the hit and miss theory, then this species would have missed trillions of times the construction of a radar system and would have perished.

As said before, a mouse is just as great a miracle as a bat. It is only because radar is a modern miracle, that we get excited, finding the same miracle operating in a bat. But in 50 years our grandchildren may wear radar spectacles when going home in a dark night, and then the bat's radar would be just commonplace, no miracle at all.

And now the second and last story, the story about the angler fish. I am an European and therefore European miracles in the world of living things have become a commonplace with me. But now I am in Australia, which has a distinct flora and fauna, quite different from the rest of the world. What I see, hear and read here in Australia about amazing creatures, make me simply gape in wonder and bewilderment. Among the most phantastic living beings, which are found on the land and in the seas, is the family of the angler fish. On the following page you will find a drawing of this almost unbelievable fish.

What follows is a real fish story, with one difference. It's a true story. That fish really exists.



The Compleat Angler - with rod, line, bait and hooks

Drawing from an article by T.C. Roughley, Superintendent of Fisheries, Commonwealth of Australia, published in the Sydney Morning Herald, 1948.

This is - as said before - a true fish story. And there is not only one species called "angler fish". There is a whole family of such species, which vary in their resources to make an amazing living: believe it or not - they angle for fish, in exactly the same way as human anglers do.

One species has on its line two pieces of bait that resemble raw meat. The angler fish lurking amongst weeds and having a wonderful camouflage of coloured stripes (another unexplained mystery in the living world - the mimicry) waits for a fish to come along. If the victim happens to come from the right, the angler would turn its bait to the right and would dangle the bait vigorously to attract the attention of the oncoming fish. The bait resembles raw meat - the victim grabs it, and is grabbed in turn.

Another species of the angler fish has 3 hooks at the end of the line. But it lives in such great depths where the waters are pitch dark. What is the use of the hooks in pitch blackness, you may ask. But you don't know the cleverness of the angler fish. Above the 3 hooks it dangles an "electric" bulb - yes, a luminous bulb, which attracts the attention of smaller fish. And Mr. Roughley, Superintendent of Fisheries writes: "Incredible, you say. But no, it is perfectly true."

He goes on to relate more miracles in this amazing family. There is one female species, which has, what Roughley calls the "portable bridegroom". The female grows to about 4 feet in length, the male however does not exceed 4 inches. It attaches itself to the female, and soon a union is created. The organs of the male degenerate, until the male is only the reproductive organ, a bag of milt, ready to fertilise the eggs of the female.

A fish, equipped with a stiff rod, a line, a bait, hooks and even a luminous bulb, this cannot be the product of mere chaotic chance. And even if we assume this - how on earth do the molecules and cells learn to manufacture all those different parts of angler equipment, hard and long the rod, thin the line, coloured the bait, hard and bent the hooks, and glowing in darkness the luminous bulb - these things cannot be explained without assuming an intelligence, a purposive force at work.

The above described fish can be seen in the aquarium of Sydney's Taronga Park zoo. I may assume that you, dear reader, have had a similar feeling as I always have, when entering an aquarium and observing in amazement the incredible forms of living fish, crabs, octopuses, snails, shells, oysters and many, many other living creatures. They all go on living, have children, experience, no doubt, joy and sorrow in their own way. And as you look on at this amazing perplexity of life, one thought overwhelms you: "Why? Why? Why? What is the purpose in this creation? Why all this?"

The scientists can give you no answer. Neither can the theologians. Only the poets may be able to express what they understand in flashes of enlightenment. But even they use words only, which have so many different meanings for us. Perhaps the musician can do it better. There is that great symphony of Beethoven, the 9th symphony, the choral. In the first movement the disharmonies clash - you feel the chaos, the inexplicable harshness of life. In the second movement you can visualize an unearthly giant at work, tossing up the seas, thrusting up the mountains, hurling the planets through space, and doing this in a kind of superhuman frolic, breathing the life into the minerals, and letting the living things thus multiply in endless variations. Confronted with this music, expressing the ringing of the spheres, the dance of the stars and the atoms, the cells and the living creatures, you realize that to ask "Why" is useless. You can only behold in wonder.

But as soon as you leave the concert hall, and are faced with your own problems, you can't help starting to ask again "Why?" Life is for you a bitter and hard struggle. You are confronted with many misfortunes, which befall you undeservedly. And you ask again and again "Why".

"Why do the wicked prosper, wax fat and kick; why do misfortunes fall upon the innocent or those who have done their best to be upright?" asks Julian Huxley. And he refers to the Book of Job where this difficult question is faced and the answer given.

"Job poses the question as applied to his own plight. His three friends answer, with the simple but crude faith which believes what it thinks ought to be so. "because you have deserved it". But Job knows this is not true. He appeals to Jehovah himself. And he is answered by Jehovah himself. The answer is as simple as that of the three comforters; but it is sublime instead of puerile, it symbolizes a true fact instead of a false hypothesis. The answer is, "Because I am the Lord; because my ways are not your ways; because you cannot understand the divine purpose; because ultimate reality is and always will be a mystery, to be feared as well as loved."

"On the other hand", continues Julian Huxley; "sublime as this idea may be, it still involves all sorts of difficulties on the theistic plane which are avoided if religion does not personify its object of worship."

The above quotation is from Julian Huxley's book "Religion without Revelation" (The Thinker's Library, No. 83, published by Watts & Co. London 1941). In this book Huxley points to the reality and necessity of religion and religious feelings, and he tries to convince the reader, that it is possible to adjust our religious thoughts to our changed knowledge of the universe - in fact, this adjustment must be made. The clash between modern science and religion is only due to the time-lag between both. That was good as an explanation 2000 years ago, may not more be good enough for today. Huxley starts his book with a quotation of Canon B. H. Streeter, who said in his book "Reality" (1927)

"Science... makes impossible any religion but the highest"

At the beginning of this chapter I have quoted from another book of Julian Huxley, in which he said: "Science... has shown that there is something in evolution which we must call progress, and it has shown that we ourselves are now trustees for any evolutionary progress that remains to be made." (110) He also speaks of the "mental" force in the universe.

Many modern churchmen have realized that the adjustment must be made, in fact is overdue. At the beginning of this chapter I have quoted a churchman of high repute, Harry Emerson Fosdick. He is pastor of New York's Riverside church. On page 219 of the second volume of this book, you will find a description of the portal of this church. Besides the figure of Christ and the four evangelists, you see there the statues of Moses, Confucius, Buddha, Mohamed, Hippocrates, Euclid, Darwin, Pythagoras, Socrates, Plato, Spinoza and even of a living man - Einstein.

We, the human beings, the highest organised living beings on this planet are the "trustees for any evolutionary progress that remains to be made." Beethoven has, in the third and fourth movement of his 9th symphony expressed this progress. In the third movement melodies of indescribable sweetness indicate that man became conscious of his soul, of all the feelings of love, the emotions aroused by beauty, the bliss overwhelming when contemplating the wonders of this world. But as yet, these feelings are inarticulate, they are felt only. In the fourth movement another stage in the evolutionary progress is reached, the miraculous birth of language, and with it, the human thoughts take shape, form and expression. The supreme intelligence which pervades the universe, makes us children of the universe realize the divine purpose in the circling of the stars, and the creatures: to create order out of disorder, and Beethoven expresses in music what Schiller expressed in words, the ultimate purpose of man on this planet:

"All mankind unites fraternal"

You will find the melody expressing these words on the title page of this book, written in the international symbols of musical notation.

The reader is asked kindly to read also a later chapter, being in direct connection with the thoughts expressed in the foregoing pages. There the book of R. A. Wilson "The miraculous Birth of Language" (53) is discussed. In this book, Wilson continues the thoughts of Darwin and comes to amazing conclusions. I humbly confess, that I have continued his chain of thoughts, in the light of a re-discovery, which I believe to have made, when scrutinizing the crude picture writings of prehistoric man.

Julian Huxley in the above mentioned book, distinguishes five important stages in the progress of man with regard to language and the expression of thoughts, and these five stages are interesting to contemplate in connection with the subject of this book. He says:

"From the point of view of the diffusion of thought and ideas man has passed through four main stages and is now entering upon a fifth. He began with speech alone. He proceeded to the invention of writing, and so to the greater permanence and accuracy of his tradition. Then came printing, with the possibility of multiplication of the written word. With the industrial era there came the substitution of machine-power for man-power, with a consequent new multiplication of the multiplying capacity of the printing press, and therefore the possibility of the dissemination of ideas literally to everybody, in every place, owing to the cheapness of mass-production.

Finally in the last half-century or so, we have entered upon a new era, whose implications and whose possibilities we have hardly yet envisaged. This is the era of new modes of spreading human thought and human achievement. Even if we leave out photography and telegraphy, there remain the invention of the gramophone, the invention of the cinema, the discovery of wireless, and the perfection of cheap colour-printing. All these, in their several ways, are completely altering the whole problem of the diffusion of culture, and so of the growth of culture and civilisation itself. Not only is the spread of ideas and knowledge, already facilitated by writing and printing, now again facilitated and speeded up, but the achievements of the human spirit in music and painting can to-day be spread and enjoyed in ways previously impossible."

If you, dear reader, have become convinced that the symbol writing proposed in this book may perhaps be a crude beginning to a new mode of writing and printing - readable in all and any language of this planet, and clearer in meaning than ordinary words - than you may agree that this new mode of diffusing knowledge and ideas may herald a sixth stage in the above mentioned progress as outlined by Julian Huxley.

And this brings us to the end of this chain of thoughts. Some readers may say, that the foregoing pages are unnecessary (in their evaluation). I have however pointed out on many previous occasions, that I had to discuss the meanings involved, in order to explain the symbolization of them in semantography. In the ordinary phonetic languages and even in the artificial auxiliary constructed languages like Esperanto etc. a word may stand for any meaning, including religion, creation and Creator. But in semantography, the elements of meaning, expressed by certain geometrical lines, must be found in ~~any~~ related meanings. In the English language there is no direct relation visible in the phonetic letter combinations (1) r-e-l-i-g-i-o-n (2) n-a-t-u-r-e (3) C-r-e-a-t-o-r. But the semantography symbols of these 3 meanings contain the same symbol, thus being more meaningful as ordinary words. And this brings me to the story, how and why I choose the equal-sided triangle as a symbol to appear in any of the above mentioned "high" meanings.

There is an age-old symbol which stands for the all-seeing, all-knowing, omnipotent Creator, for the one and universal God. We have found this symbol on many historical buildings and writings, and you can find it even to-day in many places. You will find it for instance in the great seal of the United States.



The symbol for GOD in the Great Seal of the United States (Reverse Side)


The age-old picture of an eye within a triangle has served to indicate the all-seeing, omnipotent Creator. By using the picture of a human sense organ, the eye, this symbol has been used to indicate the meaning of a "personal God" (whatever this means in the various religions and in various minds). It indicates in any case that people have tried to make a picture of the Omnipotent Creator, as a kind of person. If we want to express the meaning of a personified Creator, we may simply copy this age-old symbol. Without the eye picture, we arrive at a symbol for an un-personified Creator who keeps this universe going, and who is to be found in every aspect of our world. Atheists prefer the word Nature for this meaning. For them it is not the Creator - he, who is responsible for the circling of the stars and electrons. It is a she - Nature. She is responsible for all this circling. Needless to say, that this circumvention is a personification too.

We can then form the following symbols to stand for the following meanings:



Nature, Creation
the Universe and the
purposive force in it.

A symbol for the atheist,
the agnostic, the person
who want to avoid the
word: God, the Creator

by adding the  symbol we arrive at

eye



God
Creator

A symbol for the be-
liever in a personal
Creator, who is all-
seeing, omnipotent.

Needless to say, that the atheist deceives himself, when, by using the word Nature instead of Creator, he believes of having done away with the purposive, intellectual (spiritual) force in the universe.

In our new symbols, both meanings carry the same outline. Moreover, it shall be understood, that the addition of the eye symbol cannot in any way depreciate the meaning. On the contrary. For every human being, who still can wonder, be he or she a simple person, or a scientist, or a philosopher, the eye is perhaps the greatest marvel in the organisms of man, birds, fish and animals. That out of inanimated mineral matter shall be built an organ with a lens, an automatic iris, a living photographic plate which registers every detail of the outer world - that all this can come about out of a tiny cluster of cells, forming sperm and ovum and being united in an eruption of most passionate feelings - is there any better proof for a purposive and most miraculous force at work in the universe? That this force has given us eyes to take in the wonders of the world - is there any better proof for a spiritual force, whether we call it God, or Creator or vital force or else?

On page 567 we have evolved a compound symbol to indicate religious feeling in general. By using our new combination we can vary slightly the meaning.

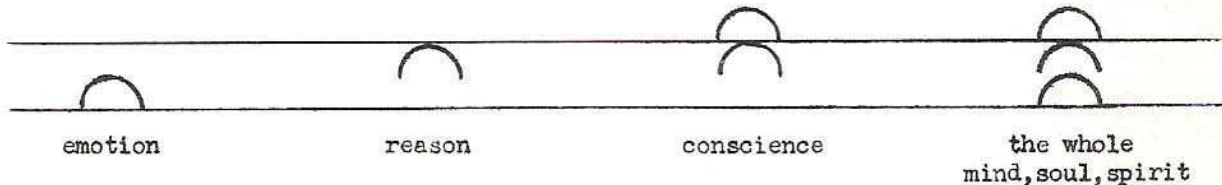


religious feeling in general
the feeling of awe which be-
liever and unbeliever exper-
ience before the manifesta-
tions of Nature, Creation, be
it the starry sky, the sea,
or a rose bud and a crystal.



religious feeling in particular
the feeling of awe which over-
comes us when we contemplate the
working of the Creator in Crea-
tion, the all-seeing, all-pervading
spiritual, purposive force, which
moves our hearts and the heavens

Instead of the heart symbol, which some people may evaluate sentimental, naive, etc. we may use our respective mind symbols on different levels:



We can now construct various symbols for slightly different meanings by confronting the different symbols for the mind (as shown above) with the symbol for creation and Creator respectively. For some of these symbols there might not be any appropriate word in the English language. On the other hand, the word ^{which} we attribute to one or the other symbol compound might not be found appropriate by other people. We must bear in mind, that all the meanings discussed in this chapter are of a highly controversial nature. The meaning of the word religion or God is such a complex one, that we can assume beforehand, that we shall not satisfy many readers with our explanation or symbolization. Take the ^{se} words religion and God. There are so many issues involved in these meanings, opposite in their aspects to the devout believer and to the fanatical unbeliever, that a satisfactory symbol is almost impossible to invent. The above symbols show the "broadest" meanings: our "heart" that is the "depth of our soul", that is our mind and its emotions, confronted with the whole of Creation.

Many writers on religious subjects are faced with this inadequacy of the words employed. When they speak of religion, they mean something special, and they set out to say it in so many hundreds of words what they understand by this word. But the word itself, suggests something else too to the reader, and these other meanings will creep up every time the reader sees the printed symbol r-e-l-i-g-i-o-n. We may compare these words with coins which have been so much in circulation that the original imprint is almost undiscernible. Similarly such coined words like religion have been so much used, misused and abused, that they have not the same value for different people. In such cases, the writers on theological subjects resort to a very sensible method: they coin a new word, which - being brand-new out of the mint - has now the only value allotted to it by the minter.

"For this reason", writes Julian Huxley, in the above mentioned book, "Marett prefers not to call what is experienced "the sacred" or "the holy", since these to us almost invariably connote only goodness, but to borrow the Polynesian word Mana, which is actually employed to-day to denote the mysterious power assumed to be resident in all objects, good or evil, desirable or to be shunned, which arouse this awe-ful sense. In the same way Otto feels constrained to coin a word for the experience of sacredness, and uses numinous, from the Latin numen, a divinity to be worshipped."

We can then proceed to coin new symbols by the combination of the above shown symbols and allot meanings to them.



the feeling of awe, when contemplating the aspects of nature, creation



science philosophy
rational contemplation of the aspects of nature, creation.



science of ethics
rational and conscientious contemplation (from the viewpoint of conscience) of the aspects of nature.

These symbols, showing only the mind of man confronted with nature, should satisfy the atheist, the unbeliever, but also those believers, who reject any personification of the spirit, force, etc. commonly called Creator.

For those who believe in God, the eye symbol may be added.



the feeling of awe (see above) in a mind who is religious (believes in a Creator)



science, philosophy as understood by a mind who, believing in a Creator contemplates rationally the aspects of nature.



science of ethics as understood by a mind, who believes in a Creator, and confronts nature and his conscience.

Now, if you dear reader protest, maintaining that these words awe, science, philosophy, ethics, and last but not least religion and God are/evaluated differently by you, the explanation is simple. All the above shown symbols carry the mind symbol. Throughout this book we have maintained that, biologically, not two minds are alike and think alike. Consequently the above meanings will be evaluated differently in different minds.

We can confront the "highest" portion of the mind only, with the creation and creator symbols. From reasons, explained in foregoing chapters, we have always depicted the two mind symbols together, to stand for conscience. (see p.178) But herebelow it stands alone. What shall it mean?



higher ethics
or some similar meaning



theology
or some similar meaning

We could go further on this road, and draw the symbol for Creation and Creator, confronted with the symbols for the whole mind - the three skull outlines, one above the other - which denote also soul, spirit, etc. We then arrive at a meaning for which learned men claim

that there is no adequate word in the English language, and that the nearest word for it is the German word Weltanschauung. Some scientists use therefore this word. However, translation is very easy. Anschauung can be literally translated with view, and viewpoint. Welt means world, which in German as well as in English does not indicate only our small world, but the universe in general with all its aspects. Weltanschauung can therefore adequately translated with worldview to mean the "viewpoint of a mind with regard to every aspect of the world".



worldview (weltanschauung)
of an unbeliever (atheist)



worldview (weltanschauung)
of a religious person.

Some readers may miss the symbolization of other meanings, for instance supernatural, or supranatural, metaphysical, metaphysics, mysticism, etc. But the symbolisation of these very vague meanings is simple. We have already symbolised supranatural in the first book (see p.28) simply by depicting the symbol for nature and superimposing the same symbol.



nature
√natural



super-nature
√supranatural

The reader is asked kindly to peruse the explanations to this symbol, offered on page 28. He will find there a quotation of Julian Huxley, who refers to the fact that scientific research has established beyond doubt, the existence of "at the moment scientifically inexplicable properties of the mind, such as extrasensory perception of various kind."

The words "extrasensory perception" will give us a better understanding of our symbols. The triangle standing alone serves to indicate the world as we perceive it with our senses. But our senses are not only imperfect, they are also limited. We have no organ to sense radio waves, for instance, and for anyone who has not yet lost his sense for wonder, radio waves and their manifestations are nothing short of supranatural. But Huxley means something on a "higher level". He mentions even precognition, and refers to yogis and mystics. Our new symbol compound could be used to symbolize meanings in this sphere. Again we might have difficulties in finding the appropriate words for our symbols, but we know already that whatever one mind thinks to be appropriate another mind will find inappropriate.



a state of mind
expressable only
by poets



metaphysics
rationally
contemplated



mysticism
or some si-
milar meaning



mystic trance
"above and beyond this
or similar meaning world"

Of course, we are free to draw even a fourth mind symbol, higher up on the line, in compliance with what Christopher Isherwood calls the "fourth conscience" which mystics attain in their trance. We may add the eye symbol to give our compound symbols additional and varied meaning, etc.

There might perhaps never be an opportunity to apply these symbols in writings in semantography. This chapter is written to show that we can symbolize even these "high" meanings, and whatever your reaction to them are, one point may be admitted, namely, that these geometrical drawings are not complicated, and that a variety of meanings can be obtained in a simple and "logical" way by variation of the symbol elements. That these meanings are different with different minds and that a great controversy is raging all over the globe (and has raged for thousands of years) is another thing, but the mind sym-

bol, understood according to the rules of semantography gives us - if not an explanation - at least a description of the fact, that not two minds are alike. Consequently, the above meanings will remain controversial for ages to come.

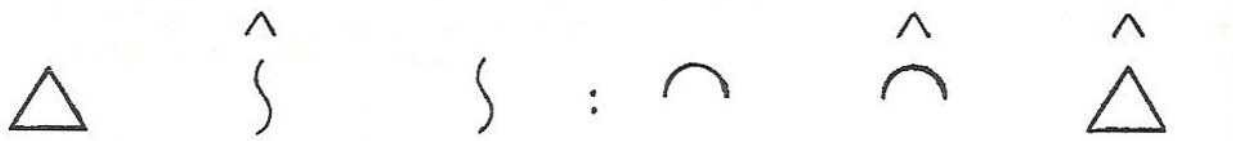
Sceptical readers may call all this a play with lines, forgetting that much writing can be called a play with words. Poets do play with words deliberately, and their products are often very pleasing to our feelings and thoughts. Semantography can be used for the same purpose and herbelow is an example.

On page 586 I recounted the story how I have been enraptured by a Dutch biologist, who at the end of his lecture quoted a British scientist, who said:

"Nature has kindled a light, the human brain, to disclose little by little her secrets."

From then on, I used this quotation to close many of my numerous science lectures.

Now let us translate this nice saying into semantography. However, we need not translate word for word. In other languages, the quotation would be somewhat different. In semantography we should strive for utmost simplicity, and we should try to say what we have to say with as few symbols as possible. Then we arrive at the following sentence:



Nature kindles a flame: the human mind to contemplate Nature's workings.

This is how an atheist would translate it. For a believer the line would run:

The Creator kindles a flame: the human mind to contemplate Creation.

Thus the promise in the synopsis has been fulfilled: a symbol which, in certain contexts could be used by believers and unbelievers, by people adhering to different religions, and moreover, the above text could be read in any language spoken on this planet.

The perfect symmetry of the above line and the simplicity of the symbols, which practically cannot be drawn more simple, may enrapture the onlooker. In any case, it enraptures me, and I can feel the same elation, felt by the Chinese scholars, when they developed a new character to express a high idea.

But there is more than beauty in the above line. Each symbol is shown twice. Once to stand for matter, then to stand for energy (action). The matter indicator has been omitted, as it has often been done in previous chapters, being not necessary. The dual representation of each thing, indicates the dual aspect of Nature in general, being matter and energy, two aspects, indissolubly forming a union.

But more is to be found in the above line. The symbol for Nature is found on both sides; at the beginning and at the end of the sentence. The Nature symbols enclose the symbols for the flame (fire) and for the human brain (mind). We may agree, that among all organic living things - not to speak of the inorganic lifeless world - the human mind is the highest and most wonderful organism. A community of cells work in close co-operation, not only to co-ordinate the working of all the other cells of the human body, but also these cells can, by some miraculous process, preserve memories, form thoughts, originate ideas and contemplate and explore all aspects of Creation with the ultimate achievement, that the human being becomes himself a creator. He can now do what the Creator has done. He can induce the molecules to combine to compounds which never existed on this planet. He can induce the plants and creatures on this earth to produce new varieties of living things.

He can harness the storm and the waters, the tides and the lightning which strikes out of the clouds. He can build machines for work and apparatuses to overcome the handicaps which he finds on this planet. And finally, he can compose symphonies and poems and can fulfil the workings of Creation; he can create order out of disorder.

Yes, we may safely agree, that the human mind is the highest living organism on this planet.

But let us look on the second dual symbol which we find in the above line: the flame. It was the biologist Wilhelm Boelsche, who maintained that the flame is the lowest living organism on earth. It lives by exactly the same process as most living organisms, by consuming food which is then burned by the addition of oxygen. It has a mouth, where it takes in the food, and it exhales water and carbon dioxide as part products of its life action and produces warmth, in exactly the same chemo-physical manner as we do. And just as with us, without food and without air, the life of a flame flickers down until it dies.

Thus we see in this symbol ~~then~~^{hence} the symbols for all-embracing Nature and Creation, embrace the symbols for the lowest and highest living organism on this planet, the begin of life and the crown of life, the human mind. As James Jean pointed out, the human race is still at the very beginning of its career on earth. We shall follow the workings of Nature we shall study the ways of the Creator, as revealed in the stars and the chromosomes. We shall - in due course - create order out of disorder.

And semantography - a halting, stumbling step forward to overcome our misunderstandings in language and thoughts, might not only be helpful on highway signs, on ships and planes, for travellers and scientists. Semantography may also be helpful to make all human beings realise that we are members of one family and that we have only to follow the examples shown by the communities of cells of our bodies, which work in co-operation for the common benefit. Then, in the words of the physicist and language planner Sir Robert Paget, we

"may well fulfil the words of Genesis, which for our remembrance, I will quote once more:

"And the Lord said: Behold, the people is one and they have one language - and now nothing will be restrained from them which they imagined to do."

THE BIBLE IN SEMANTOGRAPHY

"For then I will turn to the nations a pure language that they may call upon the name of the Lord to serve him with one consent."

Zephania, Prophets, III. 9

The first educator to penetrate the jungle is the missionary and he brings to the primitive people the world's best seller, the Bible, the only book translated in more than 700 languages (still short of the other 2300 languages spoken on this planet).

Missionaries realise that they must first teach the native to read, and they find to their dismay that the 26 letters of our alphabet are inadequate to express the special sounds of various tribes. Cyril and his brother Methodius, who set out in the 9th century to preach the gospel to the tribes in the Russian plains had at their command not the 26 letters of the Latin alphabet, but something better, the 38 letters, based on the Greek uncials. But they found these letters insufficient and they had to add another 10 letters. The Cyrillic alphabet is since then the alphabet of the Russians, the Serbs and the Bulgars, and is, besides the Roman and Arabic alphabet one of the three dominant alphabets of the world. (Webster, 28)

The modern missionary, equipped only with the 26 letters, realises soon, that he has to improvise and devise makeshift arrangements, just as in English, French, and in the other languages. So, he will be forced to combine two letters to form a new sound. If he has succeeded to teach his pupil that the letter c stands for the sound c as in C-yril, he can't then force upon him that c may also be pronounced k as in C-ross. If he has taught him to exhale the air, whenever he sees the letter h as in ex-h-ale, the missionary will have great difficulties to induce the native not to exhale at certain other words, for instance in C-h-urch. Even worse, he would have to teach him that in combination c and h shall stay for a quite different sound . . . in Ch-urch, but then Ch-rist shall be pronounced as if written with a K in the beginning. Then comes the vowel difference in Krist and Kristian.

These examples touch upon the difficulties of learning ^{only} not in the jungles but in the primary schools, where English is spoken. The missionary will soon realise that he would have to stick to the rule: one letter for one sound. But after an examination of the particular sounds of that jungle tribe, he would realise that he would have to invent perhaps 10 or 20 new letters. Modern missionaries usually do not revert to this, but make the best with the 26 Roman letters, which however, as we know, are totally inadequate.

But the difficulties are not yet fully listed. The missionary will soon find that his adapted alphabet does not suit the tribe behind the mountain, which pronounces the words somewhat differently, making peculiar sounds of their own. But this refers to two tribes who speak the same language in slight variation. With a tribe speaking another language, the missionary would have to start all over again.

Lastly, the missionary might discover that in 10 years, pronunciation in the tribe might have shifted so much, that the adapted alphabet becomes obsolete.

Missionaries might find a system like semantography very practical. Primers, picture books, etc. could be used for any tribe and for any language. One primer for one world might become a practical reality. And the tribes would soon realize the practicability of semantography for their practical purposes, in communicating with other tribes, etc.

Missionaries know, that they cannot establish friendly contact, unless they bring the tribe real and practical advantages. For this reason missions have concentrated on schools, hospitals, health centres, agricultural advisory stations, and other institutions which bring real help to the natives. Only after these signs of helpfulness will the tribe be ready to listen to some religious teaching. Only then can the missionary introduce the Bible.

Of necessity it must be a simplified Bible. The missionary will resort to simple language and will tell the stories of the Bible in a simplified form. He will omit many stories, not only those, which tell of cruel wars and extermination, but also those passages which are "dark" in meaning and difficult to comprehend - even to "civilised" people.

There is not one (and one only) translation of the Bible. There are many versions and they differ very much. But even the interpretation of the original Hebrew text is difficult and can lead to very much dissension and controversy. An example has been shown on page 570.

A Bible written in semantography would have to be a simplified Bible. Moreover the pictorial character of the symbols would prevent at the outset the depicting of metaphorical meanings. Furthermore, the simplified symbol Bible might avoid inconsistencies, which were readily accepted thousands of years back, but are unacceptable to the sceptical man of today. It is no use to point out to such a sceptic that the seven days of Creation are not actually the 7 days of an ordinary week, but are used in an allegorical way to mark seven stages in evolution, each many millions of years long. He will point to the printed word DAY and will reject the Bible. In any case, this is what actually happens with many young people. If you ask them why they reject it, they will point to such inconsistencies. The trouble with our generation is - as one Englishman pointed out - that we learn in school on Monday, Wednesday and Friday theories, which are then logically refuted on Tuesday, Thursday and Saturday. But even the conscientious Bible student is troubled with many happenings recorded in the Bible. When God created the Light in the first day, and the sun only in the fourth day, what light was it actually which lit up the scene during the first three days? Innumerable commentaries have been written about this and many other questions.

Somehow our symbols may help. Take the symbol for day for instance. It shows the sun over the horizon.



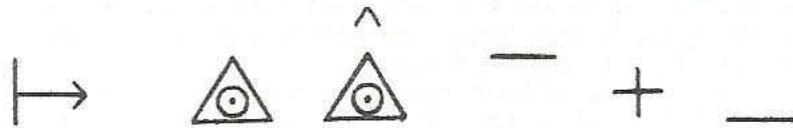
day
(sun over earth)

In the chapter "The Relativity of Time", (p.105) we have seen that all the meanings referring to time, are only relative. The above symbol for instance may mean an ordinary day (for an ordinary calendar for instance). But the actual length will vary. Everybody knows that the sun is for a longer time over the horizon in summer than in winter. A day, as depicted by our symbol may last as long as the celestial body is over the horizon. In the arctic this means up to 6 months.

But we may assume a state of affairs in the primeval times of Creation, where the planet did not rotate upon its own axis, but rotated around the central sun, one side always facing the sun, the other side always remaining in the rear. This is the situation which we find on the ^{imaginary} moon, inhabitants of the moon, living on this side, which faces always the earth, ^{would} see the earth always over the horizon. In such a constellation a day may last over millions of years. Moreover the sun is only one glowing celestial body amongst myriads of others, which we call stars. If we assume that the polar star is a sun, the light of which reaches us, we know that this sun is always over the horizon, and we have ways and means to see the polar star at any time ^{8 1/2} day or night. The sun, which we call the polar star, has been over our horizon (in the northern hemisphere) for hundreds of millions of years, making still one day as depicted by our symbol.

Such speculations are idle, of course, and they look desperately familiar to thousands of Bible commentaries in which similar arguments are brought forward in a similar manner. This diversion has only been written to show that our symbols are not so rigid and "narrow", as we assume them to be.

But it would be advisable to avoid the 7 days in a modernized and simplified Bible, and to speak of 7 stages or avoid the numeration altogether. There are other words in meanings which trouble the simple people, and we cannot give them any answer to their question. Take for instance the very first sentence of the Bible:



In the beginning God created the heaven and the earth

The critical words are "In the beginning" and anyone familiar with Bible commentaries knows that these words have been discussed in hundreds of thousands commentaries, and in fact, have disturbed the most profound thinkers of bygone times. The troubling question is: What was before the begin?

We know that the same question is put before the teacher even by little children. However we know that children are soon satisfied with an answer, any answer, but we know that somehow this question crops up many times throughout our life.

Written in the symbols of semantography, based on the "grammar" of natural sciences, the trouble becomes directly visible. On the one hand, we use the same symbol for space and time (see the chapters "The Union of Space and Time" p. 308, and "The Relativity of Time" p. 108) and therefore our symbol stands appropriately for the "beginning of space and time". But on the other hand, our symbol shows the post from which space and time measurements begin. And we have the other symbols, showing the post, and equally valid for space and time:



Meaning in space:	before, in front	after, behind	begin
Meaning in time:	before	after, behind	begin

To the pupil, it becomes directly visible that there must be a before in space and time before the "beginning", and no answer will satisfy the sceptical pupil. And the result will be disturbing. The very first word of the Bible - so he will argue - is illogical, unexplainable, etc. etc., and he will have little difficulty to find soon other troublesome words, as for instance day.

You are not expecting an answer to the above question, knowing that man may never be able to fathom the truth. But, as we have decided to write a simplified Bible, which should somehow be consistent with the natural sciences of our times, we may do the same, as we proposed to do with the word day, that is, drop it altogether. If we come to think of, we use the same method in every primer for ^{and secondary} primary schools, we drop controversial points.

When a text book, published a hundred years ago, is to be re-issued, it will be re-edited to bring it somehow in line with later findings. Moreover, the publisher may decide to issue different editions, one for the primary school, one for high schools and one for the university, the latter edition, as it is called "Unabridged and with editorial commentary." In a similar way, the stories of the Bible have been told time and again in many books with variations and abridgements, and today even the Sunday supplements have "comic" strips of Bible stories, showing Moses serving a perfect uppercut knock-out to the Egyptian overseer, etc.

In other words, a Bible written in semantography, omitting controversial meanings, being simplified and somehow in line with the natural sciences taught in school, will be just one more book, among thousands of others written on similar lines. The conservative reader should keep this in mind, before he thinks that a blasphemy has been committed.

If we read the authorized English Bible version, dating back to 1611 and commonly known as the King James version, we can't help feeling that a re-writing and re-editing, and let us say, a "re-translation" is long overdue. For millions of people, the Bible is the main reading matter, it is the Book of Books, and the language of 1949 is not more the language of 1611; or let us say the many English dialects spoken in different parts of the United Kingdoms, Canada, Australia, the United States, etc. etc. With many passages - they might as well been written in Latin; their meanings are not grasped by the simple people.










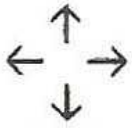











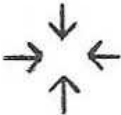



EXAMPLE OF A BIBLE TEXT READABLE IN ALL LANGUAGES












In the symbol lines below, the symbol for Creator is shown without the eye symbol. This is in line with the teachings of the Bible, according to which ^{not} only graven images should be made of the Lord, but no images whatsoever. The Jews of today still obey strictly this command, whereas it has been violated a thousand times by every picture showing God as an old man with a long beard. Many profound thinkers, very religious men among them, have expressed the opinion, that this personification has done great harm to the God idea. More than ever, it is out of date today.

I have compiled the following lines without severe examination of each sentence, knowing very well, that ridiculed it will be, no matter in what way these symbol lines are written. However, I beg ^{you} to keep in mind, that herebelow is an example of a Bible, which could be read in any tongue, dialect, idiom, etc. etc. spoken on this planet. And moreover, the symbols are in many cases almost pictures of the real things. Compare this Bible text with any other compiled for natives in Central Africa or Central Asia.











Lastly, this text, might be accepted even by an atheist. The symbol for God stands also for the meaning of Nature in all "har" aspects, and for the believer, God expresses himself in every aspect of Nature.

Example of a Bible text, readable in any language, and acceptable by believers and unbelievers.









		>								
	Book		of Creation							
	)		—	+		+		+	
The Creator	created	heaven	and	earth	,	the stars	and	the sun		
(Nature)										
	+									
and the moon .	The sun		gave	light	The sun	shone (shines)				
	>		+			>		.		÷
at the day	and the moon	shone	at	night .	The Creator	divided				
					(Nature)					
		>	—	+		>	—			
the waters	on	earth	and the waters	on	the sky					
			>		+					
The waters drew together	to	the seas	and	the dry	earth	appeared.				










The Creator (Nature) created the seeds and the grass, the flowers and trees and fruits










the fishes in the waters and the birds in the sky and the animals and









the insects and all creatures living beneath the sun and

they multiplied . And the Creator (Nature) created man superior to the

animals and birds and fishes and the Creator (Nature) gave to

man the seeds and grains and fruits for food .

If you want to find faults with the above lines, you may find plenty. I have for instance omitted to place the matter indicator on the symbols depicting real things, because it is not necessary. I have furthermore omitted in many cases to indicate the presence and/or past on the symbols indicating an action. I did this, because the creation described in the above lines, is not only confined to the begin of Creation. The birds and the animals, the fishes and the insects, and man himself is created again and again, right now in our time in the same miraculous way. We may say: the sun gives light, and we may equally well say: the sun gives light.

Herebelow are a few explanations for those readers, who have not mastered the lessons of the second book, and for those readers, who happen to chance-reading here. The fact, that many symbols are "almost self-explanatory", has led people to believe, that they should be able to read a text in semantography "right away". This has actually happened many times, but with some symbols and the people concerned have been so much annoyed that they reproached me: "your symbols are not self-explanatory". True enough, a little learning is necessary to know about the meanings of the symbols. Just think, that any text in say Greek or Russian, or French, is hopelessly not-self-explanatory, and a very hard road of several years study must be gone, before their meaning becomes clear. 1 2 3 are also not self-explanatory.

I maintain, that many of the above symbols are so simple, that children in the kindergarten, should have no difficulty to learn them. In fact, they are drawing them already.

Explanation of a few symbols in the foregoing Bible text written in symbols.

Creator,Creation (Nature), read the foregoing chapter.

light, a compound symbols showing the symbol for sun, and within, the symbol for eye shone(shines), the ACTION indicator on top of a THING symbol indicate its ACTION.

water, outline of a wave

seas, much, much water (much indicated by a multiplication mark). Wave is on the ground line.

dry, the symbol for opposite before the wave (water) symbol. The EVALUATION (adjective)

appeared, expressed by the eye symbol, and past, passive indicators: were seen. indicator is on top of symbol.

creatures, living, the symbol for life is composed by the symbol for sun, and upright bi-ped. The matter indicator on top, makes it stand for living being or creature. The ACTION indicator on top indicates to live, living. Creature can be symbolized with the Creation symbol as thing created or living thing created.

multiplied, big multiplication mark with ACTION indicator on top, and followed by life symbol. Small multiplication indicator on top of many symbols indicate the plural.

gave or gives, indicated by an arrow out of a bowl. In the foregoing sentence: the sun gave light, the emission of light (in all directions) is more aptly depicted by four arrows pointing in four directions (see foregoing page)

food, combination of the mouth and earth (line) symbol

Whatever critics may say to the symbol lines on the foregoing pages, one thing they cannot deny: the symbols are simple, and their lines are graceful, even beautiful. However, according to my own theory, the EVALUATION of simple, graceful and beautiful refers only to my mind, and other minds may evaluate quite differently. But I hope, that many other minds will agree with me.


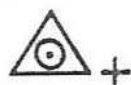

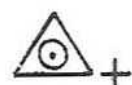

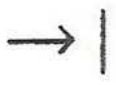
However there will be many people, who might say, that it is quite simple to write down a text in symbols, suitable to the symbols (as I have done with the foregoing Bible simplification), but that it might be impossible to translate literally, word for word an already existing text. That even this can be done with comparative ease, is shown in the following translation of the Lords Prayer. And to show that the translation suits the Lord's Prayer also in other languages, the French and the German text is written underneath the symbols. There will be however some slight deviations, as sometimes the adjective comes before the noun in English (our daily bread) but in French it is put behind it (notre pain quotidien). We shall follow the French word order, being the more natural one (stating first what it is about and then describing it: bread, daily - see the semantography rules on page 428ff). Another deviation is, for instance, that in English the earth comes first (in earth as it is in heaven), whereas in German the order is reversed. Other meanings can^{be} and are translated differently in different languages.

Lastly, as the prayer is addressed to a personal God, who reigns, gives and forgives, the appropriate symbols referring to a person are used. However, for the meaning of mind the symbol for conscience is used.

○ ♥ ⊙ > / ⊙
Prayer to the Lord

×
⊥₁ + ⊙ ⊙ " ⊙ > · — ;

<u>English:</u>	Our	Father	which	art	in	heaven ;
<u>French:</u>	Notre	Père	qui	etes	aux	cieux ;
<u>German:</u>	Unser	Vater	der Du	bist	im	Himmel ;

Hallowed be thy name . Thy kingdom come .
 Que votre Nom soit sanctifie . Que votre règne arrive .
 Geheiligt werde Dein Name . Dein Reich komme .




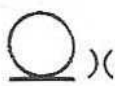
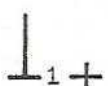







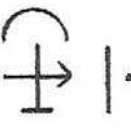















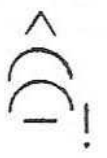




Thy will be done in earth as it is in heaven .
 Que votre volonte soit faite sur la terre comme au ciel .
 Dein Wille geschehe wie im Himmel also auch auf Erden.

Give us this day our daily bread . And
 Donnez - nous aujourd' hui notre pain quotidien .
 Gib uns heute unser taegliches Brot . Und

forgive us our trespasses , as we
 Pardonnez - nous nos offenses , comme nous
 Vergib uns unsere Schuld , wie auch wir

forgive those who trespass against us . And
 pardonnons a ceux qui nous ont offenses . Et
 vergeben unseren Schuldigern . Und











(not) lead us not into temptation , but deliver us
 ne nous laissez pas succomber a la tentation , mais delivrez-nous
 fuehre uns nicht in Versuchung sondern erloese uns

EXPLANATION OF THE SYMBOLS IN THE LORD'S PRAYER

			.		+		/		+
from		evil	.	For thine		is		the kingdom	and
du		mal	.	(here ends the Roman-Catholic version of the prayer)					
von dem Uebel			.	Denn Dein		ist		das Reich	und

		+					
the	power	and	the	glory	Amen		
die	Kraft	und	die	Herrlichkeit	Amen		

For those readers who are not very familiar with the symbols, here are a few explanations, to refresh their memory of previous chapters. For the reader who happens chance-reading here (when thumbing through the book) the following explanations may say little. However, the simplicity of the symbols may assure him, that they can express the Lord's prayer, and if he would devote some time to the study of the second book, he will be convinced, that the symbols do express the meanings for which they stand.

Explanations with references to foregoing chapters.

prayer a saying (mouth symbol) religious (heart confronted with God).

Lord, God see foregoing chapter

our the symbol indicates individual no. 1 (which stands for I) and plural multiplication mark on top indicating we and plus mark (indicating possession) making it the possessive pronoun our.

father symbol for God and for father (man supporting roof, cover, protection)

art(are) the symbol for life, indicating is, exists, lives (see p. 278)

name a word spoken (mouth symbol) or written (pen symbol) covered by mind symbol.

kingdom equal to reign, (French règne) conscience symbol leading forward (see p. 176)

will symbol for individual and mind (conscience) plus active transitive indicator whereas the will of the human individual (being "willed" upon) shows the passive transitive indicator, meaning, obeying the will. (see p. 177)

give out of a bowl, vessel

this day sun over horizon, and the symbols for past and future together, indicating presence = to-day.

forgive the symbol for will (see above) combined with the symbol for through (arrow through line) indicating permission, let through, together with the added symbol for after (dot after line) it indicates to forgive (permission after the misdeed has been done).

trespasses actions, judged as negative (minus) symbol by reason and conscience; evil actions.

lead an action into something (enclosure entered by arrow)

deliver an action leading out of something (arrow goes out of enclosure)

power ability to perform actions (see p. 246)

glory a religious expression of most (multiplication mark) above (dot over line)

Amen prayer ending (arrow stops at line)

Those who like to ridicule the foregoing symbol lines, should have a look at the Lord's prayer, written in the queer and complicated Chinese characters, which are read in China. There the Lord's prayer is prayed in different tongues, but written only in one writing.

Or the ridiculer may contemplate the meaningless jumble of alphabetical letters in the third line (written in German) and he should try to find a meaning in them, if he cannot speak German.

Whatever may be said against the symbols of semantography expressing the Lord's prayer, they represent in most cases the schematized outline of the real things of our world, whereas the alphabetical letters do not. And the symbols show the symbol elements of meaning.

French has been chosen, because it is a Romance language. German, because it is a Teutonic language and English is a hybrid of both. It may be said that in other languages, especially those of Asia and Africa, the word order is different. However, as has been pointed out in foregoing chapters, the physical order of Agent - acts - on Object remains virtually the same, even if some words are placed in a different position. Whether we say: the beautiful girl or the girl beautiful is immaterial to the meaning. The physical order in the sentence I lead you remains the same, even if expressed as I you lead. And the physical order of the sentence I lead you not can be expressed differently as I not lead you, or I lead not you or I you lead not. In semantography we write

I lead you

I not lead you

and the native, looking over the sentence, will express it according to the mode and fashion prevalent in his native language.

Still, the symbolization of the Lord's prayer could be thought blasphemous. But I followed only an example set by a great man, who lived about 300 years ago. One of the founders of the Royal Society, a scientist and a churchman, John Wilkins, Bishop of Chester. And look at his symbols:

Bishop Wilkins symbols for his translation of the Lord's prayer, and the Creed.

—
God

—
Jesus Christ

To understand the difference in these symbols read the chapter "The Pioneers of a constructed geometrical Language" on page 46, where you will find the list of Wilkin's basic symbols and an explanation of them. The affix (the small oblique line) in the symbol for Christ, denotes the first difference in Wilkins catalogue. In this particular case: the son of God. Read also the introductory chapter "Religion", where you will find another exposition of Wilkin's system.

And Wilkins, to show the advantage of a symbol writing, cites the Lord's prayer as it was read and written in the 7th century:

"Uren ~~ader~~ thic arth in heofnas, sic gehalgud thin noma; to cymeth thin ric, sic thin willa sue is in heofnas and in cortho..."

A few years before Wilkins published his "Essay towards a Real Character and a philosophical Language" (1668) a Scotch school teacher George Dalgarno, had invented a symbol writing (see p. 40 and 46ff). Dalgarno, Wilkins and Leibnitz were all influenced and excited by reports which Jesuit missionaries sent from China. There, they reported, the people have a quite different mode of writing. They use not alphabetical letters, but characters, which denote not the sounds of the words, but the meaning of them. This new writing has an advantage unheard of: it can be read in all the different tongues of China, and even books written thousands of years ago, can be read in the languages of the day.

"To seventeenth century Europe" wrote Bodmer and Hogben in "The Loom of Language" (5) "the Chinese script... was a nine days wonder." And they trace the efforts of Dalgarno, Wilkins and Leibnitz down to our times:

"In a sense, though unwittingly, revision of chemical terminology realised Wilkin's dream of a real character. Modern chemistry has a vocabulary of ideographic and pictographic symbols for about a quarter of a million pure substances now known."

And this consequence gives me the excuse, why I, a chemist, started to meddle with a symbol writing, and, following Bishop Wilkins, tried to translate even the Lord's prayer. But a fool, once on his road, cannot be stopped, and in the next chapter you will find that I did not hesitate to step onto most elusive ground, which more than anything else can cause my downfall: poetry.

POETRY IN SEMANTOGRAPHY

"I believe that the Chinese written language has absorbed the poetic substance of nature...and has,through its verypictorial visibility,been able to retain its original creative poetry with far more vigor and vividness than any phonetic tongue."

Ernest Fenollosa (31)

"The distinctive character of Chinese literature is probably one reason why Chinese tradition has proved more enduring than the Roman.The alphabetical script employed in Europe reproduces only a pronunciation of the language.When the pronunciation alters and the spoken language becomes incomprehensible,the whole literature loses its meaning.So it comes about those contributions to literature belonging to early linguistic stages are consigned to the realms of antiquity and cease to count as a live factor in civilisation,...

In Germany,for instance,Gothic material has now practically vanished from current literature,which comprises the production of a couple of centuries at most.In China, Confucius and Mencius still survive in the consciousness of civilisation."

Robert Wilhelm (30)

These sayings of two distinguished scholars have been printed already at the beginning of a chapter in the second book,which I have significantly titled "Not for Poets" (p.102) The reader,interested in poetry,is advised to read that chapter.There I pointed out,that semantography shall only be used for practical purposes - but an excursion into poetry may,more than anything else,show the vividness of the symbols.their almost self-explanatory way of showing the real things of nature.

Now,before I go any further,let me tell you one thing.During a life time work as industrial research chemist,I have helped in the production of practical gadgets.However,more and more I became convinced that the most practical thing(after the need for food,etc. is satisfied),is a poem,and the most practical man to overcome the hardships of life,is one who (besides ordinary abilities) can appreciate a poem,a sunset,a flower...

Moreover,I became convinced that poets seem to be the most sensitive creatures.In a flesh of understanding they have fathomed the laws of nature thousands of years before physicists and mathematicians formulated them.Naturally their language is somewhat different from the language of the market place,but they are excused,because they try to explain the inexplicable,and they use freely the metaphor,the simile and the analogy and other devices,in much the same way,as a physics teacher does.If he has to explain the/inexplicable property of light rays,which can push small bits of matter through space,he will use his hand to push one of his pupils,although this analogy may be scientifically impardonable.

In the foregoing chapters on politics,we have seen that the devices of metaphor,etc. are used to spread falsehood.However,in the realm of poetry,these linguistic devices are a necessity.We know very well that the "silver of the moon" is not silver and the "gold of a maiden's hair" is not gold,but this does not matter.And in the realm of the human mind even modern psychologists can find no better way to refer to the "consuming fire of passion",or the "utter downheartedness of melancholia" by the use of such metaphorical mental pictures invented by the poets.

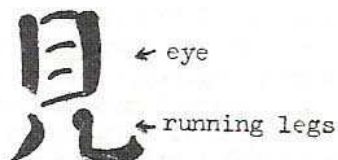
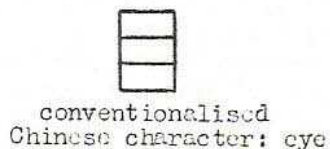
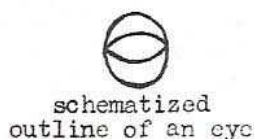
"You will ask,"said Professor Fenollosa,"how could the Chinese have built up a great intellectual fabric from mere picture writing?...The Chinese language...has passed over from the seen to the unseen by exactly the same process which all ancient races employed. This process is metaphor,the use of material things to suggest immaterial relations." (31)

"The heart's...' (in Chinese),"said Professor Chamberlain,"gives numerous abstract words denoting sentiments and passions." (9)

The symbols in semantography,denoting states of mind,follow the same method.Even if we substitute the heart symbol by the mind symbol,the curved outline of the cranium indicates only metaphorically this indelectable reality:the human mind.But these outlines are very vivid and suggestive,similarly to the vividness of the Chinese symbol for"heart" showing a partial outline of the heart and 3 drops of blood.

For a person,who has been able to penetrate the "second great wall of China" as Lin Yutang calls the Chinese written language,it will not come as a surprise that Professor Fenollosa proposed in all seriousness "The Chinese written Character as a Medium for Poetry" (Stanley Nott,London 1936)

However, for a reader who cannot read Chinese characters, they are an incomprehensible array of strokes, and he will not be able to discern in them the outline of real things. To understand Prof. Fenollosa's rapture, one simple example will be shown below.



Chinese character for: to see

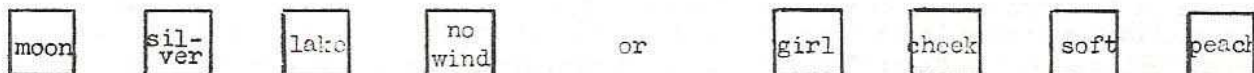
To indicate the meaning of to see by an eye with running legs is indeed a vivid expression, although a metaphorical one. If we come to think of, we use a similar expression:

His eyes run over the assembly

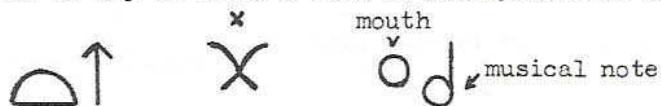
or in a poetical way: My eyes hasten to meet yours

Unfortunately, however, most Chinese characters are very complicated and the original picture almost obliterated. Nevertheless, scholars claim, that once you have absorbed the meaning of a character, the original picture stands vividly out in the mind. We have to take their word and believe their saying, that Chinese poems are the world's finest.

Actually, the method is simple. Suppose we write down the following characters



It is clear that these poetical lines could have been written 2500 years ago without loss, when read in the languages of today. And the fact, that each Chinese character in itself contains a poetical metaphor (like the one above) adds only to the poetical expressiveness. The words and their order are of course important, but they are of secondary importance as can be shown, when we try to write a line in the symbols of semantography.



which line we can read:

The sun is rising, birds are singing

or Up goes the sun, the birds a-singing

or The sun ascends to music of the birds

or in French Le soleil se leve, les oiseaux gazouillent

or Le lever du soleil aux melodies des oiseaux

or Au chant des oiseaux, le soleil se leve

or in German Die Sonne steigt, die Voeglein zwitschern

or Auf geht die Sonne, Voeglein singen

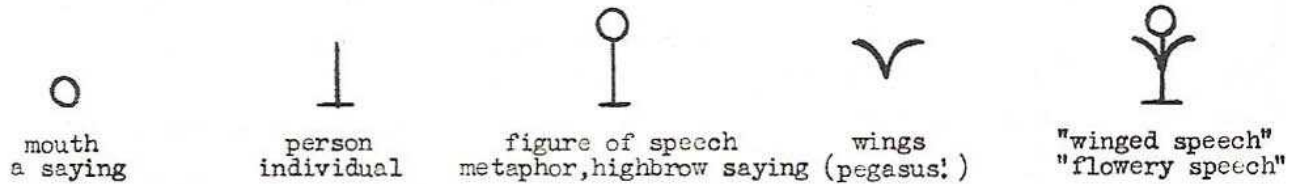
or Im Sang der Voegel steigt die Sonne

The word order is irrelevant, and even the words used, are of secondary importance. Of first importance is the actual happening, and this is vividly depicted by the symbols.

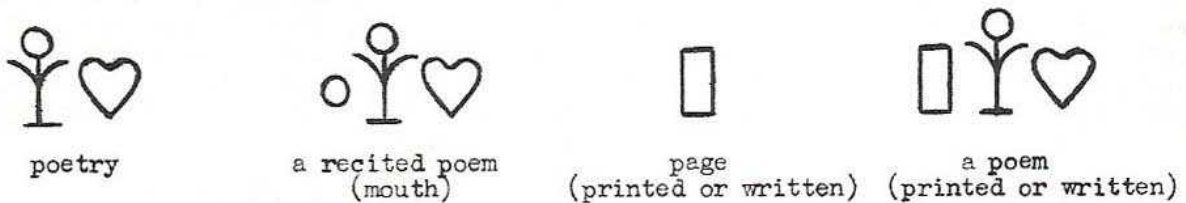
Our symbols contain even metaphorical expressions, like the one shown in the Chinese character for to see. The rise of the sun is metaphorically expressed by the shooting upwards of an arrow. Singing is expressed by the symbol of the mouth and the well known musical symbol of a note. But we may even go further and claim, that the symbol of the musical note contains the mouth symbol, the primary organ for music in bird and man.

Critics may say, that these semantographic symbols may perhaps be used for "landscape painting," but they are inadequate to express high ideas. Whatever example I would bring to prove my case, there might still be the suspicion that I have carefully chosen lines which can easily be translated into symbols. For this reason, I have chosen for translation an English poem. Below you will find a few lines from Wordsworth poem "The Prelude." I have chosen these lines for two reasons. Firstly, they appear in the book "The miraculous Birth of Language" by R.A. Wilson (53) of which we are going to hear more in the last chapter. Wilson uses the intuition of Wordsworth in support for the organic hypothesis of evolution, as against the mechanistic hypothesis. The second reason is that the few lines of Wordsworth say much better what I have stammeringly tried to say in many paragraphs referring to the meaning of Creator. What Wilson calls the world-spirit, or life principle or life force (he avoids the word God, because this word "connotes in the minds of most people an anthropomorphic agency, a limited personality") Wordsworth calls the active principle and in the following lines he uses the word presence.

Again I have tried a translation of Wordsworth lines into a Romance language, French and a Teutonic language German, and I have done my best to find measured words. Naturally, metaphorical expressions are used by Wordsworth, and in a previous chapter we have learned that the symbol for metaphor and poetical metaphor must be placed before such expressions. These symbols we have developed as follows:



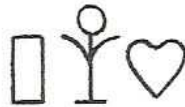
You will find more about the employment of these symbols on p. XIII and p. 422. The metaphor symbol when used before a metaphorical expression in politics, serves as a warning sign, and in fact, the symbol looks like a sign, as used on the highways. And the symbol for a poetical metaphor, indicating "flowery speech" looks like a flower. If we add the metaphorical symbol for "heart", indicating feelings, emotions, passions, etc., we arrive at a very vivid symbol for poetry.



Herebelow are the lines from Wordsworth poem:

And I have felt
A presence that disturbs me with the joy
Of elevated thoughts; a sense sublime
Of something far more deeply interfused,
Whose dwelling is the light of setting suns,
And the round ocean and the living air,
And the blue sky, and in the mind of man;
A motion and a spirit, that impels
All thinking things, all objects of all thoughts,
And rolls through all things.

I shall try a literal translation. However, the critic must be very well versed in the reading of the symbols, before he criticises. I, for one, am very familiar with my symbols and they exert upon me the same fascination, as Chinese characters do to scholars who can read them.



William Wordsworth

Poem by William Wordsworth

Poème par William Wordsworth

Gedicht von William Wordsworth

And I have felt a presence that disturbs me
 Et j'ai senti une présence qui me bouleverse
 Und ich fühlte eine Gegenwart die beunruhigte mich

with the joy of elevated thoughts ; a sense
 avec la joie de pensees elevees ; un sens
 mit dem Gluecke erhabener Gedanken ; ein Sinn

sublime of something far more deeply interfused,
 sublime de quelquechose beaucoup plus profondement enfusée,
 sublime von etwas viel mehr tief durchdrungen,

whose dwelling is the light of setting suns, and
 l'habitation duquel est la lumière des couchants soleils, et
 dessen Heim ist das Licht der sinkenden Sonnen, und

the round ocean and the living air ,
 le rond ocean et le vivant air ,
 der runde Ozean und die lebende Luft ,

CONCLUSION OF THE THREE BOOKS OF SEMANTOGRAPHY

+	□	/	⤿	<	∧	;	⤿	⊙	+
And	in	the	mind	of	man	;	a	motion	and
Et	dans		l'âme	de	l'homme	;	une	motion	et
Und	in	der	Seele	des	Menschen	;	ein	Bewegen	und

/	⊙	⤿	”	→□	⊗	⤿	⊙	,
a	spirit	,	that	impels	all	thinking	things	,
un	esprit	,	qui	impulse	tout	pensante	chose	,
ein	Geist	,	der	antreibt	alle	denkenden	Dinge	,

⊗	⊙	<	⊗	⤿	+	⊙	→	⊗	□	,	
all	objects	of	all	thought	,	and	rolls	through	all	things	,
tout	objet	de	toutes	pensées	,	et	roule	entre	toute	chose	,
alle	Objekte		aller	Gedanken	,	und	rollt	durch	alle	Dinge	,

Here, I shall not give a special explanation of some compound symbols, as I have given following the translation of a Bible text, and the Lord's prayer. Those readers who have followed me through all the 609 foregoing pages know that these symbols can indicate the meanings of the words in Wordsworth poem, and they know too, that some "elusive" meanings are just as vague and elusive when written in the words of ordinary languages, but in the above symbols are indicated by their source, the mind of man, this mysterious tool of the Mind in the Universe.

These readers do not need a special explanation, and they might benevolently agree that the symbols above are graceful and meaningful.

For the other readers, who reject the idea of semantography, another thousand pages of special explanations will be wasted. They will not recognize that a symbol writing is already in operation for many thousands of years in East Asia; that it has brought about the oldest culture of man in China, where astronomers scanned the sky at a time, when the stone-age hunter roamed the forests of Europe; that it has united through its supra-linguistic writing the most diversified races, peoples and tribes into one, the greatest nation on Earth: that this symbol writing unites today all the different languages spoken in East Asia in most efficient applications for commerce, industry, science, political unification, and also for the study of the writings and poems, written thousands of years ago.

Readers, who reject the idea of semantography, might not realize that the few international symbols, which we use in writing, mathematics, chemistry, science in general, but also on the highways and the sea lanes, came about only by many conscientious efforts of far-sighted pioneers, men of the same type as those pioneers, who introduced all the great innovations. Of course, at their time, people laughed about a ship without sails, a carriage without a horse, and they will laugh about a symbol writing, which could unite the peoples of this planet, which could be read in all languages spoken on this planet, which could be used for innumerable practical purposes of international co-operation, and also for reading a poem of a poet who wrote it for all the peoples of the Earth to enjoy it.

Presently people use ships without sails and ride in horseless carriages - and surely a day will come, when the efforts of all those people, who have joined the movement for semantography will be crowned with success. We shall use a symbol writing for all people. One writing for one world. It will come. Why not? Why not, indeed?

C. K. Bliss

THE INSTITUTE FOR SEMANTOGRAPHY (I F S)

and

THE SOCIETY OF SEMANTOGRAPHY (S O S)

A chapter for those readers, who are interested in Semantography, who want to learn it, to work for it, to pioneer it, to improve it or even to discard it for a better system of their own.

"Since it is the first handbook...it has, inevitably, the glaring faults of any new thing."

Introductory words of Lancelot Hogben to his "Science for the Citizen", which he calls the first handbook on Scientific Humanism.

Every contribution to the problem of international linguistic communication, however insignificant, however, imperfect, however futile, is a contribution nevertheless and it may help future researchers to avoid past errors and to improve good ideas.

The efforts of the language planners and all their supporters during the last hundred years were great. Without pay, without proper time, without encouragement from any official source, they plodded on, untiring and unselfish in the firm belief that their work may help mankind a step forward towards a better world, with more mutual understanding and help.

Two world wars and the breakdown of all international efforts for co-operation have not deterred the enthusiasts of Esperanto to carry on, and for them their work is a kind of religion, a kind of fulfilment of the creative impulse in man.

I hope that these men and women will rally to the support of semantography, since it is not a competitive proposal, but a stepping stone for a spoken international language. When international symbols are in use all over the world, we may find the necessary international words to suit the symbols. Guérard (20) said:

"Zamenhof was willing that his Esperanto should be reformed, transformed, or even discarded altogether, provided it be in favour of a language so established and supported that it would be secure once and for all."

But the supporters of Esperanto, or Interglossa, or Interlingua, or Idiom Neutral, or Romanian need not fear, that their system will be discarded altogether. Bodmer and Hogen in "The Loom of Language" (5) said that:

"it is probably true to say that most people who now advocate an artificial language, approach the prospect with a ready ear for new proposals. The plethora of projects...should not make us despair of unanimity. On the contrary, failure brings us nearer to accord. As Jespersen remarks in the beginning of his book on his own constructed auxiliary (Novial): "All recent attempts show an unmistakable family likeness."

This family likeness is based on the many Greek and Latin roots, which form the words in most auxiliary languages, and are now increasingly invading all and any language. Words like dynamo, motor, radio, video, telegram, etc. etc. are used today all over the world. English itself, is a hybrid language and contains a Latin term (or Greek term) for most meanings. It is therefore very likely that, once symbols are firmly established, words will be found from Basic, or Esperanto, Interglossa, etc. etc. to suit the symbols and vice versa.

In many countries, societies and clubs for Esperanto are formed and are still continuing their world-embracing activities. I hope that these clubs will join new clubs and societies to propagate this symbol writing. It has all the adventurous excitement of Esperanto, and moreover the semantics of semantography may help even more to clear up misunderstanding than the inter-linguistic symbols. There is misunderstanding not only between people of different languages, but between people who speak the same language.

The occupation with semantography may be looked at as a fascinating and daring adventure into almost unknown territory, an adventure in which everyone could become a pioneer in collecting data and research material for further work and improvement.

At this point, the reader may turn back to the very first page of this book, where he

or she will find an appeal

TO YOU wherever and whatever you may be

I have tried there to say in strong words, what the work for semantography could be for people and what it could mean and how it could help in our life. The reader is asked to read those lines again.

There is an exciting hobby, not only for the boy scout and the girl guide, who could communicate with their fellow scouts all over the world. There is help for the stamp collectors, who could thus converse with other collectors by letter and could exchange stamps. There is exciting work for anyone, be he or she in a thronged city or a lone log cabin.

Should interest in semantography become great then a world-embracing society will be formed, the Society of Semantography (SOS) with branches in every country, every town or village, where enough enthusiasts can be found. Besides this Society, there will be the Institute for Semantography (IFS), which will act as the academy for semantography and which will assist in the printing of primers, new textbooks, new special booklets for special human activities, and all the IFS and problems of an international symbol writing will be dealt with.

The Society of Semantography (SOS) should act as the focal point where all interested people will gather and from ^{where} the SOS call will go out to the peoples of the world to join in the adoption and use of an all-embracing writing, which everyone could read in his or her mother tongue. The Society and its members shall support the work of the Institute. In the following paragraphs some details of this work will be outlined.

The work of the Institute of Semantography.

When this book will be published, the Institute will already operate, and its first work will be the propagation and translation of this book in as many languages as possible. Cheap editions, abbreviated booklets, prospects and folders shall be printed and distributed. The Institute will try to interest the universities and scientific foundations for active and financial support.

The Institute will organise the first clubs, and nuclei of the Society of Semantography, and will help to make it a world-wide organisation.

Among the first works to be done, will be a primer picture book with no words (of any language). This book should be used by the teachers in the kindergartens of literate nations, and by the teachers in countries, where illiteracy is rampant. It should be the book, which I have mentioned many times "One Primer for one World".

Another important work, to be started by the Institute would be a Dictionary on Semantography and English and vice versa, and later on, for other languages. It might seem, that a dictionary of the symbols would be almost an impossibility, considering the varied geometrical lines. However, we have a very good precedent, which will ensure success: the dictionaries for Chinese characters. There is one big book, which is the marvel for any foreigner, who comes to Shanghai. The Chinese version of the Shanghai Telephone Book, a heavy volume with more than 1000 pages. If I, a foreigner have learned to look for a name of a man or a firm - and to find it, a dictionary on the simple and clear symbols of semantography would be an easy task.

In the Chinese dictionary, the characters are arranged according to the numbers of strokes, of which the character is composed. First come the characters with one stroke, then the characters composed of two strokes, and so on, up to the character composed of 32 strokes. With compound characters, composed of two and more characters, the order is the same, and that character will come first, in which the first symbol is composed by the smallest number of strokes, and so on.

In the dictionary of semantography, the first symbol element will be the dot; consequently the first line will show the dot, which concludes a sentence. The second line will show two dots, the colon (:), and its explanation. The third line will show 3 dots .: which means, dust, powder (see p. 120), etc. Additional related symbols or references to other pages will accompany each line.

After the dot, the next symbol element will be the comma, and in succeeding lines, the little stroke ('), will be shown, in different positions, first as comma (,), in the next line as apostroph ('), then the double comma, as quotation mark ("), etc.

The next group would be combinations of the dot and the comma, as for instance as semi-colon (;) and as exclamation mark (!).

Then the lines will be arranged, first the horizontal, then the vertical and the oblique straight lines. After these lines and their combinations will come the curved lines, etc. Considering the complicated characters of Chinese writing, the semantography dictionary

would be very simple in comparison, and easy to operate after a short training.

Once the dictionary is ready in English, it would be an easy job to print the corresponding dictionary for French. We may even go further and print a dictionary with the symbols in the first column and the words in 5 different, but familiar languages in the 5 columns next to the symbol column. Thus, we could issue a dictionary for French, Spanish, Italian, Portuguese, and English in one book. The comparison of the similar, but differently written words in the different languages, would give the learner an idea of the family likeness of those languages, and would help him to recognize their familiarities.

Another task of the Institute would be to determine the amount of necessary symbols for any trade and industry, and to issue special booklets to be revised year after year, according to the growing needs of these trades and industries. All this would cost money. How to get the funds? The symbols are copyrighted in all countries of the Berne Convention, and in the United States. These copyrights are waived for users, but not for those who make money by printing, painting, engraving, or making these symbols appear on any surface by any means. Those firms who employ their own painters (as for instance aircraft companies) would have to pay a small royalty, just as the symbol printers. This money shall be used for the promotion of the symbols (see p. 66 of this edition).

Another job of the Institute will be the co-operation with the typewriter manufacturers. Once, an interest in semantography is established, the typewriter manufacturers will soon bring an adapted typewriter on the market. As they have constructed a special typewriter with not less than 265 different Amharic symbols for so small a market as Abyssinia, they will not have much difficulty to adapt the ordinary typewriter with lines instead of the capital letters, and provide the small adjustments, which are described in the pages 94 to 97 of the second book. Once the great manufacturers have agreed with the Institute with regard to the arrangement of the lines on the keyboard, other manufacturers will adopt the same arrangement, so as to enable people to use their make.

The issue of periodicals and magazines.

On page 350 and the following pages the idea has been worked out for modern newspapers and periodicals, printed in the national language of the various countries. There I have shown, that these newspapers may print a news summary for foreigners in a corner of a page, for foreigners to read, or as a puzzle corner for the natives. Similarly the childrens pages in the Sunday supplement may contain a little about semantography. Pictorial magazines may bring a sub-caption beneath their pictures.

Apart from these applications of semantography in the daily press and national magazines, the Institute will issue its own papers, and the Society in the different countries will issue national magazines, printed in symbols, but also containing explanations and articles in the national language. A further differentiation may be brought about by the issuing of international periodicals for stamp collectors, for boy scouts, for the various trades, and industries, etc. etc.

Schools will have to be established and teachers trained, and approved. All this work will have to be supervised by the Institute, and if semantography spreads, we would have branches of the Institute in different countries, co-operating with the branches of the Society in these countries.

The approval of changes in the symbols and the establishment of new symbols.

When semantography becomes a "living" thing in the hands of the people of this planet, changes are bound to happen. New symbols will have to be added to the list, and old symbols might need alterations. Judging from what happened in the Esperanto movement, we may expect a host of proposals for alterations to be poured out on the men of the Institute and the publishing company. The adoption of a steady middle course will necessitate much skill. On the one hand, changes will have to be made, where improvements are found to be imperative. On the other hand, constant changes might kill the whole idea. If a learner knows that he would have to unlearn every year, and that his textbooks might not be valid one year hence, he will be discouraged right at the start. The greatest spread of Esperanto and its greatest period was during the time, when the "fundamento" was declared sacrosanct and not alterable. Unfortunately, Esperanto was built on too complicated lines, with redundant adornments, which proved unnecessary. There was therefore a growing demand for alterations and improvements, and simplifications. When counter proposals were brought forward, Ido for instance, the whole movement broke almost down. Many changed over to Ido, and the others still clinging to Esperanto brought forward not less than 50 different proposals for Esperanto I, Esperanto II, Idoesperanto, Neoesperanto, etc. etc. which tended even more to discredit the whole movement.

My idea to cope with such a situation is as follows: if this book creates a great interest and is subsequently translated in different languages, ^{they} we expect that many interested readers will forward proposals for improvement of singular symbols or whole groups of symbols. The Institute will study every proposal very carefully, and will answer each proponent. It might well be, that the promoter of alterations does not realize that, in altering certain symbols a mess might be created in another group of symbols. This should be pointed out to him and if he submits new proposals, which take this situation into account, his new proposals should be studied, ^{perhaps} and adopted for later use.

It is hoped that the authorities, the universities, and the scientific foundations will show an active interest in the development of semantography, and that through this active participations, alterations will become necessary. After a time of, let us say, 2 or 3 years from the publication of this book, the first official primer, dictionary and textbook shall be issued, which will contain all improvements and alterations. After the issue of this official textbook and dictionary there should follow a declaration of a stabilisation period, to last not less than 5 years. During this stabilisation period new symbols should be adopted for new products, but these new symbols and symbol compounds should be constructed with the basic symbol elements, which shall remain unalterable during the stabilisation period, in order to give the system the necessary stability, which alone will ensure that people will be interested to learn and to use it.

However, time marches on, and it will be inevitable that new proposals will come forward during these 5 years. In order to deal with them and to ensure a progressive development of semantography a system of international congresses of a new nature shall be established.

The International Congresses of the Society of Semantography

On page 402 you have found a chapter titled "The Congress in Writing". The leading quotation to this chapter is taken from a newspaper report, dealing with the complaints of scientists, participating in UNESCC congresses. They say that the congresses take up much travelling time and disrupt their work in the laboratory and the university. They recommend a Congress in Writing.

The faults of present-day congresses have been outlined in that chapter, and the reader is asked kindly to peruse this chapter for the full understanding of the proposal put forward in the coming paragraphs.

The Society of Semantography should convene such Congresses in Writing every second year. Let us assume that one congress is over, and in the following period, interested pioneer workers put forward new proposals. These may first be published in the national magazine, and if found interesting, may be taken up by other magazines. The permanent secretary of the congress will then fix a date line for the submission of new proposals for the coming congress, let us say 9 months after the last congress. After this date, the submitted proposals should be printed in the periodical, issued by the Institute, and taken up by the national periodicals in the different countries. In the gatherings of the clubs these proposals should be discussed, and their impact on the language of that special club should carefully be studied.

This discussion period should last another 9 months during which time, the advantages and disadvantages of the proposal would have been discussed orally and in print. After the end of this date, the proponent would have to affirm his first proposal, or bring it forward in an altered form, (on account of the objections made), or withdraw it altogether.

The final proposals for the coming congress, which will be convened in 6 months time, should then be printed in a congress sheet to be submitted to each member in each country. Now all interested persons will submit their final opinion, which will go first to the national centre of the Society. Each country, according to the amount of members may be granted a certain amount of lines in the final congress sheet, to express their pros and cons. This final sheet shall then be submitted to all the members the world over; the session of the world congress has begun.

In the final sheet, each member will be asked to vote for each proposal, whether it should be adopted as put forward, whether it shall be turned down, whether it shall be put back to discussion until the next congress, or whether the counter proposals Nr. 1, 2 or 3 shall be adopted. Voting will have to be carried out during the following 2 months, and a date line will be fixed.

Alterations in the basical symbols should only be made when there is a 75% majority for this alteration. As said before, basic alterations are a dangerous thing, and should only be made, when a great majority of all the users are in favour of them.

Such alterations, when approved by the congress, will then be put into a booklet to serve as appendix to existing textbooks, and of course will be incorporated in any new textbook.

The protection of semantography for world unity.

The democratic procedure outlined in the foregoing paragraphs might ensure a unified development of semantography for world use. Anyone who has ideas about this development can put them forward, can have them discussed by a world forum, and can see them adopted by the majority of the users of semantography.

Moreover any man and woman, specially interested in semantography can become a teacher, or a secretary or an executive in the national branches of the society. He or she can become the president of the branch in his or her country. He or she can become engaged to work on the staff of the Institute, and even become its director, president, or president of the World Society of Semantography. In the course of his work, he the reformer might be able to reform semantography, and to change it altogether, in favour of his better system. There are actually no limits for the man and woman, who want to work actively for semantography. However, they must realize, that the most important thing is: to ensure the world unity of use. If semantography will break up in different national factions, which will use slightly different symbols and different rules, than the whole idea will be defeated. Everyone who want to improve semantography must realize that this urge for improvement shall not lead to a break-up, to a defeat of the whole idea of "One Writing for one World".

Nevertheless, we may be quite sure, that people in various countries, will stage a break-away, and will start to promote their own system of symbols. This has happened with the auxiliary languages, and it will surely happen with semantography. Especially those reformers, whose proposals have been defeated by the world congress, will do anything to draw sympathisers in their camp, and if possible stage a counter-system. As this might well be fatal for the whole idea, we may consider ways and means to counter-act such attempts for disunity. With good words, and logical arguments, and even with appeals we might achieve nothing with fanatics, who see only one aim: the promotion of their system, and even if it should lead to the break-up of the whole idea.

We must use force, that is legal force, the rights which the Institute has acquired in the different countries, based on the International Agreement on Copyright, and the various national laws regarding copyrights in different countries. The copyright procedures are already well worked out in many countries, and legal proceedings are routine in many courts.

I have built up a series of copyrights, which should ensure sufficient protection against plagiarists. My experience with patent rights has enabled me to work out certain registrations of the symbols and their likely variations, which could be a good basis for a legal suit against users, who cannot refrain from inventing fancy symbols of their own, and against authors and reformers, who do not want to work within the frame work of the world society. Judging from my experience of the protection of such rights, I believe that a good case can be made in any court, and can be won. In any case, the Institute and the Society will stand behind such proceedings, and it may well be, that this accumulated force will be sufficient to make any author and his publisher think twice, before they start on their counter system.

We have many precedents concerning international co-operation. Today, it may seem senseless for any country and any reformer to stage a counter system with regard to the internationally agreed symbols for the numbers 1 2 3 4 5 6 7 8 9 0, or the division of the day in 24 hours, or the international date line, or the longitude and latitude degrees, or the notation in music, or the various international agreements for postal, telegraph, and radio communication. True enough, they all have their faults, and improvement is needed, but no country would dare to stage a counter-system of its own, because it would mean disruption and confusion for itself. If an improvement has to be made, it can only come about by the international agreement of all countries.

But this state of affairs, which seem to us so natural, so self-evident was non-existent a hundred years ago, and before an international agreement was reached. At that time many proposals were put forward and different systems were in operation in different countries.

We may envisage a time, when a kind of symbol writing, either this semantography or another and better system, will be in operation over the whole world, and nobody would think of staging a national counter system. But until this international agreement will be reached, we must do anything we can to combat dissension and disruption of this idea. This fight we can do legally, based on the copyrights on semantography, which will be vested in the Institute. If we win one test case in one country, we shall go on winning also in other

countries, until the reformers will realize that it is simpler to work within the frame work of the Society, where the way is open to them to become the Director of the Institute and the President of the Society. I personally, have no ambition with regard to such posts. On the contrary.

A few words about myself.

Now ^{as} this overlong manuscript draws to a close, I may be allowed to say a few personal words about myself. I am not a young man any more. I am passing the 52 year mark, which brings with it a certain attitude to life, as well as a proper estimation of one's own capabilities. I am not yearning for world recognition. I know very well, that for every well-wisher, there would be 100 critics, who will not shrink back to abuse the system, the idea and myself.

Personally, I have ^{had} a good measure of success and recognition in my life. I was a successful industrial research chemist, as well as a works manager, and executive. I have had success not only as a science lecturer, but even as an artist and a musician. I have seen my name in print and on posters, and have tasted applause and public acclaim. Moreover, I have travelled widely and have lived a good life. Now, the crowning of my life has come. An idea occurred to ^{me} in China, and I knew what I had to do: hard work to work it out. This I have done throughout the last 7 years. No matter, how clumsy this first proposal for a modern symbol writing is, it is a first step, and may lead to further improvements.

Should I not find a publisher, which is unlikely, I shall send the duplicated copies of this manuscript to the most important libraries of the world, where they ^{may} become forgotten, to be rediscovered perhaps ^{years} hence, to be copied, pirated, stolen - and even if my name would be forgotten - it does not matter in the least. I know that I have fulfilled my destiny, and have been an infinitesimal link in the evolutionary process of the universe, a vessel, however imperfect, for the purposive force of the world, call it what you may.

Just a few days ago, I have received a letter from Mrs. Betty Stoltenhoff, who helped ^{recting} me ^{cor} my first manuscript. She drew my attention to a new book "The World Sensorium" by Oliver L. Reiser, Avalon Press New York, 1948, and she quoted from page 28:

"The central difficulty with humanism has been that it has tried to put an immensely simple message into WORDS, whereas such a message can only be written into a form of a universal picture language. The job is to find a layout, a picture basis, so simple and so huge that it is usable by anyone who has mastered the movies or can punch a radio panel."

In order that you may understand my state of mind, let me say this: if nothing more is going to happen during my life time about semantography than this little quotation, I shall be satisfied. It gives me the assurance that my work is not in vain.

But as long as I shall breath, I shall work for it. Knowing my temper, however, knowing that I usually get burned up and strike back with all my might, knowing that my physical forces are very limited, I have one great wish and hope: that this idea and this work should be taken out of my hands by young men and women, who are ready to work for it, and who would create a world-wide movement. If I can still work within this movement, in some sort of advisory capacity, it will make me happy. But if the system of semantography would be wholly discarded in favour of a better one, it will make no difference whatsoever. I have no ambition to be a Director or a President of the Institute or the Society. This is all open to you, dear reader, if you strive for it. But what I would ask from you, is the realization, that work and improvement on this idea can only be carried out, when the unity of the movement is preserved at all cost. Counter proposals, different symbol writings in different countries would create a new Babel, and would kill the idea or postpone its realization. Here is a text, which I consider as a kind of moral obligation:

I, the reader of this book, interested in the promotion of this idea, am fully aware that competitive counter systems would defeat the whole idea of a common medium for international communication. I consider it therefore a moral obligation to refrain from such acts, and to co-operate in the propagation and improvement of this medium for understanding between the peoples of this planet.

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APPENDIX 2

EXCURSION INTO THE DAWN OF MANKIND

AND A PHANTASTIC HYPOTHESIS

A study of our knowledge about the origin of language, of writing, of man and of war.

During my 7 years of work on semantography I became interested in the theories about the origin of language and the history of writing. The latter interested me foremost, because I believed that I could gain much insight into the working of primitive picture languages. During this study I came across very interesting facts, and I believe to have made a discovery, or let us say, a re-discovery. Other men, it seems, have found it out before, but the idea seems so phantastic, that no one believed it.

The purpose of this chapter is to evolve this hypothesis on account of the evidence, and also to show what an exciting subject such studies into language and writing origin can be. The content of this chapter warrants a book for itself. I shall therefore give an abridged account of my manuscript, and shall not bother the reader with many quotations to prove my case. If interest is forthcoming, a special publication will be made, and if only a few scientists will accept the evidence as enough interesting to go further into the matter, we may expect very far-reaching results from such an enquiry. It may change the face of the earth. This is no idle boast, as the reader may judge from the conclusion.

There are two books available, which seem to me of great significance. Their study may be a short cut to the results which comparative philology has achieved up till now. Let us therefore start with

THE ORIGIN OF SPEECH

The book, which will provide us with a short cut, is "Language, its Nature, Development, and Origin" (George Allen & Unwin, London 1922) by one of the greatest linguists of modern times, Otto Jespersen. In the chapter The Origin of Speech, he wrote:

"the theme, which is to occupy us in this chapter (is) the ultimate origin of human speech. We have already seen the feeling with which this subject has often been regarded by eminent linguists, the feeling which led to an absolute taboo of the question in the French Société de linguistique..."

Nevertheless linguistic science cannot refrain for ever from asking about the whence (and about the whither) of linguistic evolution."

Jespersen refers to former theories, which have been nicknamed:

Bow-Wow Theory: Man copied sounds of animals, etc. and thereby obtained natural words, such as bark, cuckoo, etc.

Pooh-Pooh Theory: Instinctive ejaculations called forth by pain or other intense sensations and feelings, such as Oh, Ah, Ach, (aching), etc.

Ding-Dong Theory: 'Everything which is struck, rings! We have the words gong, knock, bang, hollow, etc.

Yo-He-Ho Theory: Under strong muscular efforts it is a relief to the system to let breath come out strongly. We have the words heave, haul, etc.

An interesting additional theory may be mentioned here. The physicist Richard Paget, advances a theory in his book "Babel, or the Past, Present and Future of Human Speech" (Kegan, Paul, Trench, Trubner & Co. London 1930) that gesture language played a prominent part in man's early efforts on communication. The mouth too was used in such pantomimes. Paget believes that many words have been formed by using the tongue to make a gesture. When we say "up" our tongue involuntarily moves upward within our mouth.

Jespersen finds the bow-wow, pooh-pooh, ding-dong and ye-he-ho theories unsatisfactory and indicates the three fields of investigation, which may lead to further insight, namely

- (1) the language of children
- (2) the language of primitive races
- (3) the history of language.

The language of children

"Some biologists", said Jespersen, "maintain that the development of the individual follows on the whole the same course as that of the race; the embryo, before it arrives at full maturity, will have passed through the same stages of development which in countless generations have led the whole species to its present level. It has, therefore, occurred to many that the acquisition of mankind at large of the faculty of speech may be mirrored to us in the process by which any child learns to communicate its thoughts by means of its vocal organs. Accordingly, children's language has often been invoked to furnish illustrations and parallels of the process gone through in the formation of primitive language. But many writers have been guilty of an erroneous inference in applying this principle, inasmuch as they have taken all their examples from a child's acquisition of an already existing language..."

No; if we are seeking some parallel to the primitive acquisition of language, we must look elsewhere and turn to baby language as it is spoken in the first year of life, before the child has begun to 'notice' and to make out what use is made of language by grown-up people. Here, in the child's purposeless murmuring, crowing and babbling, we have real natural sounds; here we may expect to find some clue to the infancy of the language of the race. And again, we must not neglect the way children have of creating new words never heard before, and often of attaching a sense to originally meaningless conglomerations of sounds... (p. 416 of "Language")

In the chapter on the Creation of New Languages, Jespersen refers to the great rôle which children play in this respect and he mentions an almost forgotten theory, advanced as early as 1886 by the American ethnologist Horatio Hale. It makes exciting reading and lead us directly into the romantic story of the North American Indians:

"Hale was struck with the fact that in Oregon, in a region not much larger than France, we find at least thirty different families of languages living together. It is impossible to believe that thirty separate communities of speechless precursors of man should have begun to talk independently of one another in thirty distinct languages in this district. Hale therefore concludes that the origin of linguistic stocks is to be found in the language-making instinct of very young children. When two children who are just beginning to speak are thrown much together, they sometimes invent a complete language, sufficient for all purposes of mutual intercourse, and yet totally unintelligible to their parents. In an ordinary household, the conditions under which such a language would be formed are most likely to occur in the case of twins, and Hale now proceeds to mention those instances - five in all - that he has come across of languages framed in this manner by young children. He concludes: It becomes evident that, to ensure the creation of a speech which shall be a parent of a new language stock, all that is needed is that two or more children should be placed by themselves in a condition where they will be entirely, or in a large degree, free from the presence and influence of their elders. They must, of course, continue in this condition long enough to grow up, to form a household, and to have descendants to whom they can communicate their new speech."

"These conditions Hale finds among the hunting tribes of America in which it is common for single families to wander off from the main band. In modern times, when the whole country is occupied, their flight would merely carry them into the territory of another tribe, among whom, if well received, they would quickly be absorbed. But in the primitive period, when a vast unhabited region stretched before them, it would be easy for them to find some sheltered nook or fruitful valley... If under such circumstances disease or the casualties of a hunter's life should carry off the parents, the survival of the children would, it is evident, depend mainly upon the nature of the climate and the ease with which food could be procured at all seasons of the year... In ancient Europe, after the present climatal conditions were established, it is doubtful if a family of children under ten years of age could have lived through a single winter. We are not therefore, surprised to find that no more than four or five language stocks are represented in Europe... Of Northern America, east of the Rocky Mountains and north of the tropics, the same may be said..

But there is one region where Nature seems to offer herself as the willing nurse and bountiful stepmother of the feeble and unprotected... California. Its wonderful climate (follows a long description)... Need we wonder that, in such a mild and fruitful region, a great number of separate tribes were found, speaking languages, which a careful investigation has classed in nineteen distinct linguistic stocks? "In Oregon, and in the interior of Brazil, Hale finds similar climatic conditions with the same result, a great number of totally dissimilar languages, while in Australia, whose climate is as mild as that of any other region, we find hundreds, perhaps thousands, of petty tribes as completely isolated as those of South America, but all speaking languages of the same stock - because

because "the other conditions are such as would make it impossible for an isolated group of young children to survive. The whole of Australia is subject to severe droughts, and is so scantily provided with edible products that the aborigines are often reduced to the greatest straits." (p.182)

Jespersen discusses then the five cases of twins, mentioned by Hale and tells a moving story about the Icelandic girl Saeunn:

"She was born in the beginning of the last century on a farm in Hunavatns-syssel in the northern part of Iceland, and began early to converse with her twin brother in a language that was entirely unintelligible to their surroundings. Her parents were disquieted, and therefore resolved to send the brother away, who died soon afterwards. They now tried to teach the girl Icelandic, but soon (too soon, evidently) came to the conclusion that she could not learn it, and they were foolish enough to learn her language, as did also her brothers and sisters and even some of their friends. In order that she might be confirmed, her elder brother translated the catechism and acted as interpreter between the parson and the girl. She is described as intelligent - she even composed poetry in her own language - but shy and distrustful... The language to Jonasson, who heard it, seemed totally dissimilar to Icelandic in sounds and construction; it had no flexions, and lacked pronouns. The vocabulary was so limited that she very often had to supplement a phrase by means of nods and gestures; it was difficult to carry on a conversation with her in the dark... (p.184)

I have given these quotations not only to show the trend of scientific thought, but also to show, what exciting stuff the study of language can be, once tedious grammar study has been removed.

We shall now hear what Jespersen has to say, with regard to the second field of investigation:

The Language of primitive Races.

We would believe, that their language is "primitive", that their expressions, grammatical structure, etc., etc. are extremely simple. However, the reverse is the case. In the words of Jespersen:

"The more these languages are studied and the more accurately their structure is described, the more also students perceive intricacies and anomalies in their grammar. Gabelentz (Spr. 386) says that the casual observer has no idea how manifold and how nicely circumscribed grammatical categories can be, even in the seemingly crudest languages, for ordinary grammars tell us nothing about that. P. W. Schmidt (Die Stellung der Pygmaenvölker 1910, 129) says that whoever from the low culture of the Adanese would expect to find their language very simple and poor in expression would be strangely deceived, for its mechanism is highly complicated, with many prefixes and suffixes, which often conceal the root itself. Meinhof (MSA 136) mentions the multiplicity of plural formations in African languages. Vilhelm Thomsen, in speaking of Santhal (Khervarian) language, says that its grammar is capable of expressing a multiplicity of nuances which in other languages must be expressed by clumsy circumlocutions;... Curr speaks about the erroneous belief in the simplicity of Australian languages, which on the contrary have a great number of conjugations, etc. The extreme difficulty and complex structure of Eskimo and of many American Indian languages is so notorious that no words need be wasted on them here. And the forms of the Basque verb are so manifold and intricate that we understand how Larramendi, in his legitimate pride at having been the first to reduce them to a system, called his grammar El Imposible Vencido, 'The Impossible Overcome'

What is here said about the languages of wild tribes (and of the Basques, who are not exactly savages, but whose language is generally taken to have retained many primeval traits) is in exact keeping with everything that recent study of primitive man has brought to light: the life of the savage is regulated to the minutest details through ceremonies and conventionalities to be observed on every and any occasion; he is restricted in what he may eat and drink and when and how; and all these, to our mind, irrational prescriptions and innumerable prohibitions, have to be observed with the most scrupulous, nay religious, care; it is the same with all the meticulous rules of his language" (p.426)

Jespersen draws the conclusion in regard to the language of primeval man:

"Primitive language had a superabundance of irregularities and anomalies, in syntax and word formation no less than in accidence. It was capricious and fanciful and displayed a luxuriant growth of forms, entangled one with another like the trees in a primeval forest."

It seems therefore that many modern advanced languages of to-day are simplifications of complex primeval languages. This is in line with modern observations. On page 53 of this book, I have cited Stanley Rundle, who tells us about the Imperial Russian decree, prohibiting Lithuanians to use their language. After 200 years, when the decree, which included even the death penalty was lifted, 93% of the whole population spoke only Lithuanian, but the language was preserved in its "archaic form, as it had not been free to develop."

Other striking examples are the simplifications which had been brought about in the English language.

Although Jespersen warns that his conclusions cannot be adopted generally he gives the following formula of what is his "total impression of the whole preceding inquiry:

"THE EVOLUTION OF LANGUAGE SHOWS A PROGRESSIVE TENDENCY FROM INSEPARABLE IRREGULAR CONGLOMERATIONS TO FREELY AND REGULARLY COMBINABLE SHORT ELEMENTS"

This opinion has a direct bearing on semantography, as we shall later on see in the chapter on the History of Writing. We should believe that the primeval picture writings on the walls of caves, etc. should be easy to decipher. The contrary, however, is the case. The fact, that primeval languages are very complex, may lead us to the assumption, that the beginnings of a written primeval language were equally complex. Those primeval writings are full of seemingly senseless lines and forms, which we may compare with the irregularities of primeval speech.

And this answers also an argument which might be brought forward against semantography. Critics may say, that we are going back to the level of primitive man, in accepting a picture language. I believe, however, that I have proved throughout this book, that this symbol writing ^{a new form} is freed from "irregular conglomerations" and ^{it} has been developed along the lines indicated by Jespersen: "freely and regularly combinable short elements."

The question is now: would primitive people in Asia and Africa take easily to semantography? There is all the evidence that the experiment would be a success. We shall, of course, not bother those people with highbrow meanings, which even the European people (without higher education) cannot understand. But as the symbols show the outline of the real things, simple people should have no difficulty to grasp this writing. Moreover, the practice has shown, that, for instance, the Australian aborigines, a people living virtually in the stone age, pick up easily the handling of a motor car or any other modern tool. The aborigine children in Sydney's schools are not behind the white children in their grasp of mathematics or any other discipline. Semantography is a modern tool, for practical needs.

Let us now return to Jespersen, who explores now the third field of investigation, The History of Language

"The third and most fruitful source from which to gather information of value for our investigation is the history of language as it has been considered in previous chapters of this work... (p. 417)

"The method I recommend which I think I am the first to employ consistently, is to trace our modern twentieth century languages as far back in time as history and our materials will allow us; and then, from this comparison of modern English with Old English, of Danish with Old Norse, and of both with "Common Gothic" or French and Italian with Latin, of modern Indian dialects with Sanscrit, etc. to deduce definite laws for the development of languages in general, and to try and find a system of lines which can be lengthened backwards beyond the reach of history... and if by this process we arrive finally at uttered sounds of such a description that they can no longer be called a real language, but something antecedent to language - why, then the problem will have been solved; for transformation is something we can understand, while a creation out of nothing can never be comprehended by human understanding..." (p. 418)

The greater part of Jespersen's book is devoted to this enquiry and interested readers will find it exciting reading. Even an abridged account would fill many pages, and therefore, the best we can do here, is to quote from the last chapter of Jespersen's book, which he titles

Conclusion:

"Language, then, began with half-musical unanalysed expressions for individual beings and solitary events. Languages composed of, and evolved from such words and quasi sentences are clumsy and insufficient instruments of thought, being intricate, capricious and difficult. But from the beginning the tendency has been one of progress, slow and

fitful progress, but still progress towards greater and greater clearness, regularity, ease and pliancy. No one language has arrived at perfection; an ideal language would always express the same thing by the same, and similar things by similar means; any irregularity or ambiguity would be banished; sound and sense would be in perfect harmony; any number of delicate shades of meaning could be expressed with equal ease; poetry and prose, beauty and truth, thinking and feeling would be equally provided for; the human spirit would have found a garment combining freedom and gracefulness, fitting it closely and yet allowing full play to any movement.

But, however far our present languages are from that ideal, we must be thankful for what has been achieved..."

Jespersen did not stop at this wishful thinking. He was one pioneer in the forefront of the Esperanto movement, and when this movement led to improvements and other auxiliaries, like Ido, Jespersen proposed a new auxiliary language which he named NOVIAL from NOV (new) International Auxiliary Language.

Somehow, however, Jespersen's conclusion does not satisfy us. He says that language began with cries of man, as a continuation from the cries of the animals, and that in that slow evolutionary process language became more and more articulate. Jespersen bases his conclusion on the theory of evolution, but he cannot bring any proof. However, we cannot expect any conclusive proof. The anthropologists, at least, base their theories on the bones of primeval man found in caves or sedimentary rock. But they are unable to say, or to make any speculation about the colour of the hair or eyes of primeval man. May be that one day, a human specimen will be found completely preserved in a frozen block of ice, somewhere in the Siberian tundras or elsewhere in the north. But even then, there will be no possibility to have a preservation of the most fleeting of events, sounds, cries, the language of primeval man.

Being somewhat dissatisfied by the findings of the linguists, we turn to other quarters, hoping to find out more about the birth of language.

The Birth of Language and of Man.

Jespersen has based his speculation on the theory of evolution, as brought forward by Darwin. This word "Evolution" gives, of course, no explanation of what has happened on earth - and Darwin makes this perfectly clear. It is only a word of descriptive nature. It describes a process, of which we know nothing. However, as with the magic of words, the descriptive word "Evolution" has got a "life" of its own, and is now brought forward by many people, including learned men, as a kind of explanation. In a similar way, other words of a descriptive nature, as "Gravitation" "Curved Space", "Electro-magnetic Waves" etc. are taken by the intellectuals of today (with few exceptions) as to contain in itself the explanation of the phenomenon named. Thus our ignorance is covered.

So, the intellectual people of the last 80 years have come to believe that Darwin's theory of evolution, has done ^{away} effectively with any purposive force in the Universe, has done away effectively with the childish stories of the Bible about Creation, and has established beyond doubt, that man descended from the ape.

However, scientists of today have come to think differently. In the chapter on "Creation" (p. 587) I have quoted the botanist Eric Ashby who said: "We retain those parts of Darwin's work, which have withstood eighty years of criticism, and we forget the rest." It is not commonly known that present-day anthropologists have already rejected the theory that man is a descendant from the ape. They believe now, that both, man and ape had a common ancestor, and that - at a certain time in the history of the earth - a branching-off occurred, precipitated by circumstances, of which we know nothing, but surely geological, climatical and other physical circumstances - man was born, a "primitive", a "primeval" man, to be sure, but distinct from the ape.

This modification of Darwin's view may tempt us to look for other enquiries ^{to} the birth of man and in the birth of language. In my search I came across a very interesting book by Richard Albert Wilson, Professor of English Language and Literature in the University of Saskatchewan, Canada. The title of the first edition in 1937 was

The Birth of Language
Its Place in World Evolution and its Structure in Relation to Space and Time
(published by J.M. Dent & Son, London)

In the later edition in 1941, Wilson changed the title significantly to
The miraculous Birth of Language

This word "miraculous" must not be taken in the restricted "religious" sense. By this word Wilson wants to indicate that a momentous happening caused the birth of man and of language, a happening, to be sure, not contrary to the natural laws, but brought about by the natural laws which govern the happenings in the universe. Wilson apparently did not want to invent a new word for this happening, believing that very soon, the word itself will be taken as an explanation. In order to indicate that we know nothing about the momentous happening, he called it "miraculous".

Bernard Shaw got so enthusiastic about ^{the} ~~it~~ that he wrote a preface of 28 pages to the 1941 edition, which preface begins with the following words:

"This book by Professor Wilson is one in which I should like everyone to be examined before being certified as educated or eligible for the franchise or for any scientific, religious, legal, or civil employment."

In the following paragraphs I shall try to give an outline of Wilson's enquiry, by quoting some paragraphs from his book. However, as this can only be a cursory procedure, the reader is strongly advised to read the book, not once but a few times. The findings of Wilson are in line with the trend of thought, which Hogben calls Scientific Humanism, and of which he, Julian Huxley and others are the main exponents.

Wilson cites first the Hebrew Bible, according to which God bestowed upon man the gift of language, so that he may name "every beast of the field, and every fowl of the air." But, continued Wilson:

"From the modern point of view this theological explanation of language origin and vicissitudes has turned out to be unsatisfactory, but it is interesting as showing man's ~~very~~ ^{very} interest in the problem and some of his first guesses about it. It is significant also from the fact, that it was the generally accepted language origin theory up until the middle of the eighteenth century..." (p. 11)

"In the eighteenth century, however, the question of the probability of a natural, rather than a supernatural origin of language began to stir in men's mind. Rousseau's essay on the Origin of Language, about 1750, might be taken as the historical landmark which stands between the old and new points of view..." (p. 14)

After Rousseau, the search was taken up by Herder, Kant, Goethe. The discovery of Sanscrit by Sir William Jones led to the science of comparative philology. Its foremost scholars, besides Sir William Jones, were Sir Charles Wilkins, Friedrich Schlegel, Franz Bopp, Wilhelm von Humboldt, Max Mueller, William Dwight Whitney.

"Max Mueller and Whitney, the chief representatives of the linguistic thought of the time, both clearly stated the position, and a sentence from each will give the definite starting point for the next stage of our advance. 'What then', Mueller asks, 'is the difference between brute and man? What is it that man can do, and of which we find no signs, no rudiments, in the whole brute world. I answer without hesitation; the one great barrier between the brute and man is Language' (Science of Language, Collected Works, Vol. ii, p. 489). 'But as things are', Whitney writes, 'every community of man has a common language, while non of the lower animals are possessed of such; their means of communication being of so different a character, that it has no right to be called by the same name' (Life and Growth of Language, Chapter XIV, p. 281, 1875). These two quotations give quite adequately the view, regarding man and language, which was held by linguistic scientists from 1772, when Herder first clearly formulated it in his essay, until Darwin entered the field in 1871..." (p. 42)

"With the publication of the Descent of Man in 1871 the whole problem of language was suddenly expanded into a much wider region. Darwin, in that book, distinctly challenged the human boundaries that had been set to language as being artificial and arbitrary, and extended the problem into the animal world, maintaining that the difference between the language of man and the cries of animals was not a difference in kind, as had been formerly thought, but a difference in degree only, a difference in definiteness and connotation and distinctness of articulation. This difference in language followed naturally, he maintained, upon the difference in degree of their mental development."

"Max Mueller, with other philologists, opposed Darwin's view, claiming that articulate language was the evidence of man's power of abstraction, 'a power which differentiated him completely from the animals.' (p. 43)

"It is customary now and a mark of modernism to speak of the language of animals and the language of man as merely two branches of the same thing, as though there were no longer any doubt about the question. One purpose of the present treatment is to open

the question again, and to re-examine more closely the difference between man and the animals which Darwin practically obliterated some sixty years ago; to discover if possible what specifically happened when man emerged from the animal nature into a new world, whose new conditions necessitated articulate language..." (p.45)

"Darwin, though convinced of the organic unity of the world in its evolution from its lowest to its highest forms, did not succeed in completely establishing his conviction by logical proof or actual evidence. There were at least two gaps in the development process that he saw no way of bridging: (a) the gap between inorganic and organic nature (see footnote), and (b) the gap between organic nature without intelligence and organic nature with intelligence. In the third chapter of the Descent he writes: 'In what manner the mental powers were first developed in the lowest organisms is as hopeless an inquiry as how life itself first originated. These are problems for the distant future, if they are ever to be solved by man'

"Recognizing that language is connected with the mental faculties, Darwin includes his now well known discussion of language in the closing part of the same third chapter. He opens the discussion with the following: 'The faculty of language has justly been considered as one of the chief distinctions between man and the lower animals. But man, (as a highly competent judge, Archbishop Whateley, remarks) is not the only animal that can make use of language to express what is passing in his mind, and can understand more or less what is expressed by another... In Paraguay, the Cebus Azarae, when excited, utters at least six distinct sounds, which excite in other monkeys similar emotions.' The dog barks in at least four or five distinct sounds'. From accumulated evidence of this kind, Darwin draws the conclusion at the end of the fourth chapter, to use his own words, that 'the difference in mind between man and the higher animals, great as it is, certainly is one of degree and not of kind'. The same he holds to be true of language" (p.52)

Wilson is of the opinion and he expounds his theory with convincing arguments, that there exists a barrier between man and animals. He calls this barrier, the "barrier of space and time"

"There seems to be some barrier that holds the animals mind back from that realm of free mind into which man has entered, where language first emerges. What is the barrier? Can it be intellectually grasped and described. These are the two questions."

The "barrier of space and time" is to be understood as the consciousness about space and time. Man is conscious of space and of time, and he can differentiate between both and between the differentiations in space (the things of our world) and time (past, present, and future).

"At some time and, it seems to me, from some creative and purposive force at work in the world, there emerged into life within the mind of man a new power or faculty for explicitly differentiating the objects of the world, both in their distribution in Space and their succession in Time; and with this awakened power of explicit differentiation a consequent need and corresponding impulse for something far more definite and elaborate than the few nebulous or misty-edged natural sounds which satisfied his preconscious needs." (p.54)

Wilson does not attempt any speculation about this momentous event. He is no geologist, no paleontologist, no physicist, and therefore he cannot venture any possible theory. We shall return to this point later on. It is enough to know that an apparent barrier exists between man and animal. Before this barrier the dumb animal still dwells. When the branch of animal, which led to man, broke through this barrier, man emerged, conscious of space and time. It must have happened in the dim history of life on earth, millions of years back.

The question is now: did this "break-through", this decisive change, occur out of a chaotic constellation of electrons and protons, or did it occur owing to some creative and purposive force at work in the world. In the words of Wilson, there are the two theories, the mechanistic and the organic theory. As we know, the mechanistic theory held sway during the last 80 years, and Wilson explains and deals with this theory with the restraint of the objective scientist. In the preface, however, Bernard Shaw, recalls the heated controversy in his younger years, and he pours his scathing sarcasm about some of

Footnote: Recently I have studied a new book "Prehistoric Life" by Percy E. Raymond, in which he deals with the emergence of life on earth and its consequent evolution. He offers no speculation as to what Life really is. "What life is", Raymond says, "no one knows!"

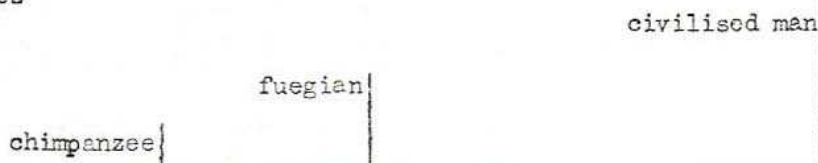
those "Darwinians":

"They went further," Shaw writes, " - far beyond Darwin, who was never a Darwinian. They lost their tempers if any one hinted that there was any purpose or design in the universe at all. They set up a creed called Determinism, compared to which the story of Loah was cheerful and encouraging. One of its tenets was a topsy-turvy view of Causation in which the cause was itself an effect, and could not help itself... Materialism went stark raving mad. The author of this book calls it Mechanistic; but the materialists dislike the term; for a machine, like Paley's watch, is a product of purpose and design; and this the Ultra-Darwinians would not tolerate at any price... they had never been able to dispose satisfactorily of Paley's puzzle. If you find something as full of purpose and contrivance as a watch, he argued, you know that it did not make itself; somebody must have contrived it and made it."

To this outburst in the genuine Shaw spirit, I wish to add, that no one will cast suspicion on the socialist Shaw of playing into the hands of the church. But for anyone familiar with the state of mind of many intellectuals, including teachers and professors, it is common knowledge that they deny any purpose in the universe, any intellectual power behind it. Scientists have devised experiments to prove that living beings and their bodily and mental activities are motivated by no purpose. Wilson cites Prof. A.N. Whitehead, who wrote: "Scientists animated by the purpose of proving that they are purposeless constitute an interesting subject for study."

Prof. Wilson does not use such colourful words as Shaw, but his words are not less significant. He writes:

"Darwin, as we have seen, held that there was no barrier; that the difference was merely a difference in degree of mental development'. While this statement, as we have also seen, gives us no specific light on the problem at its present stage, it had a value in its time, and has been considered adequate by most biologists and general readers since Darwin's time, who have made no close study of language. His followers, to illustrate the view, have frequently made the statement that the difference in mental development between the lowest type of savage, the Fuegian, for example, and a fully civilised and cultivated man is greater than the difference between the same savage and the anthropoid ape. Recently I came across the following illustration, used to symbolize the relative differences



But both the statement and the illustration are clearly erroneous, owing to the confusion of resemblance of power with identity of power."

With this Wilson means, that an ape resembles only a man in the exercise of his powers, whereas with the fuegian and the civilised man there is identity of power. And Wilson proceeds to prove his theory by an example.

"If we were to take a six-month-old Fuegian infant and place him in an educated English-speaking home in Canada with its common educational opportunities, what and where would he be in twenty years? He would be first of all in complete working possession of a highly developed language... Then, by means of this language, he would have elaborated concretely for himself the various parts of this mental world, in history, geography, literature, mathematics, science, and would stand in much the same position as any Canadian boy, who had a long line of ancestors. The seeming gulf between the savage and the civilised man would be practically bridged in a quarter of a single life-span.

Now put the chimpanzee's six-month-old offspring in the same home and environment, and at twenty years he would know none of these things. He is excluded by some impassable barrier from man's mental world, the world which man has actualised and elaborated by means of language. Darwin expresses surprise that some men should still think that there is any such barrier between the two. 'Nevertheless', he writes, 'many authors have insisted that man is divided by an inseparable barrier from the lower animals in his mental faculties'. Well, these authors, as a matter of demonstrable fact, are right and Darwin wrong. The Fuegian is at the outset already across the barrier... and moves forward in that new world of free mind immediately opportunity is given. The chimpanzee... is blocked, as yet at least, by the barrier... whether we can ever explicitly describe that barrier or not..."

As said before, Prof. Wilson makes no attempt to speculate about what actually happened, when the animal broke through that "barrier" to become man. We shall do some speculating in later paragraphs, and we can do this with the accumulated knowledge of geology, physics and related sciences. One thing is sure. According to the Organic Theory, which Wilson expounds, man is a part of nature, not something set upon and besides nature. His body is composed of the same chemical materials which form the rocks and all inanimate things. The same can be said of his brain matter. Consequently, the body of man and the matter of his brain, is subject to all the physical laws, which we find in nature. Coldness and warmth, the sunshine or darkness, climate, flora and fauna, and many other factors of nature, affect man today and did affect him in bygone times. At a certain time in the history of life on earth, it seemed that the crown of creation would go to the insects, and indeed the ants and the bees have developed communities of order and communal social behaviour, where no one goes hungry, and food is stored for the whole of the community. But at a certain time in the dim history of the earth, some decisive changes must have occurred. Changes in the climate, in the distribution of edible substance, in the composition of the air, in the radiation from the sun or from ultrawaves coming from the depth of the universe - we don't know what happened, but surely something happened only in "recent" times, in the Tertiary, when man emerged through exceptional circumstances, which no doubt affected his brain matter, and made him conscious of space and time and of all the implications which go with this consciousness. Wilson refers to some purposive force at work, which he sometimes calls World Spirit, and for which he refuses to use the word God, because as people understand this word, its meaning is too narrow to account for the happenings in the universe.

But even if you are a so-called atheist, and if you refuse to attribute the happenings in our world, to some mind, acting through matter, you will agree that so-called "natural" causes must ^{have} been the factors, which eventually brought conscious man into being. Of course, your solid convictions may be shaken, if you inquire for more knowledge by modern biologists. Some of them may shrug their shoulders, if you ask them for a "natural" explanation of Creation. They may say, that the only explanation brought forward so far is the explanation, which we find in the Bible. This, of course, will be very unsatisfactory for you and also for me, and I too searched the newest books for enlightenment. There is Prof. Raymond's book "Prehistoric Life" mentioned before. He gives a detailed account of all the findings in the subsequent geological strata of early life. So far, the earliest finds are in the so-called Cambrian rocks, and the few finds in pre-Cambrian strata are doubtful. But the species found in Cambrian rocks are so varied, that Raymond asks, have we discarded the story of Creation, supposed to have taken place about 6000 years ago (based on the Bible's narration), only to transfer special Creation to Cambrian times, supposed to have taken place about 500 million of years ago (based on the calculation about the break-up of the Uranium atom)?

Now, we do not need to believe in a kind of "miraculous" Creation, contrary to the laws of Nature. We may assume that we do not know yet the story of what has happened, but scientific investigation will uncover the mysteries in due time. Today, even the fervent believer, does not think for a moment, that the world, and the animals, and man were created in just 6 days. We assume, that the Hebrew narrator of the Genesis expressed in some sort of analogy, or allegory the early happenings. On the other hand, many happenings described in the Bible did take place, and archeologists have not only been guided by the descriptions in the Bible, but have actually found the evidence of the truth in the Bible. And Prof. Wilson believes that the Hebrew writer's account of the creation of man is a direct reference to that decisive change, the overcome of the barrier, when man emerged, conscious of the things around him, what he needed now, were symbols to differentiate the world around him.

"Obviously, what man required was a system of mental symbols of some kind or other in the inner world of mind, to represent the system of actual types in the outward world of sense..."

"It was out of this necessity that the articulate and cumulative language of man had its birth. Language is just that needed system of symbols which man has created for the elaboration of that new space-time world of mind to which he was called by the 'World-Spirit' when the world emerged from the preconscious to the conscious cycle of its self-development."

"Language then, is a new phenomenon in the world, brought into life at that point where the reason of the world emerges from its unconscious state to its freed and conscious life" (p.151)

Again, we may discard any reference to a World Spirit, and say in the "atheistic spirit", that man invented his tools out of sheer necessity, and out of sheer necessity he had to differentiate his cries to make it explicit to his fellow men that this cry refers to an animal, and that other cry to some berry. In other words, when man became conscious of the world, he invented language as a new tool. This explanation seems more "natural", but not less "miraculous".

And Prof. Wilson refers to the Bible story, not as an account of a "super-natural" happening, but as the narration of what has actually happened, namely that language was miraculously born, when man was born.

"The Hebrew writer of the Genesis narrative had observed the fact that of the gifts which God had bestowed on man, language was one of the most significant. Man had come into possession of the unique power of naming and classifying the things of the world; and in attempting an explanation of how this naming process was actually accomplished that early writer put it in the following manner:

"And out of the ground the Lord God formed every beast of the field, and every fowl of the air; and brought them unto Adam to see what he would call them; And whatsoever Adam called every living creature, that was the name thereof. And Adam gave names to all cattle, and to the fowl of the air, and to every beast of the field."

"That", continues Wilson, "is the Hebrew writer's brief and naive story of the birth of language; a story which the modern child of ten years will still accept at literal face value, which the man of twenty, who puts away childish things, will reject, and which the philosopher of forty, who has grown in discernment as well as in knowledge, will re-accept with some surprise at the amount of factual truth contained in it. We do not think now, of course, that the naming of living things in the world happened in such a summary matter-of-fact fashion as that, and yet there are things in this old account that have significance still to the modern scientist, despite the new views about language which have become orthodox since 1871."

Wilson goes now into a very interesting analysis of the significant facts arising from the naive Bible story and concludes:

"From the modern point of view this theological explanation of language origin and vicissitudes has turned out to be unsatisfactory, but it is interesting as showing man's very early interest in the problem and some of his first guesses about it."

This quotation appeared in the beginning of the discussion of Wilson's book a few pages back, and with it I shall close this discussion. In my opinion, the book of Wilson may become the starting and focal point of a new enquiry, which may have far-reaching effects. In any case, it influenced me profoundly and it helped me in my searches for the early writings of man.

As said in the beginning, this chapter has two purposes, the first to show how interesting the study of language can be, and secondly, to lead to a new hypothesis, which in turn may be the starting point of new research of the most far-reaching effects. All what has been said in the foregoing pages of this chapter leads up to the coming hypothesis, born out of the evidence of early picture writing.

The History of Writing.

I shall not try to give an account of the history of writing. There are excellent books, profusely illustrated, which show the early records written in some undecipherable symbol writing, or in the Egyptian hieroglyphics, or in Babylonian cuneiform writing, and the authors show, how gradually, the letters of the alphabet were evolved through innumerable changes, starting from a schematized picture, until they took on the present-day form.

In this chapter I shall devote my attention to the earliest records of man. When the idea of a modern picture writing got hold of me, I was naturally interested in the picture writings of former generations, and I read all the books and studied all the pictures I could get hold of. However, we must discern between the primitive writing of modern people, and the primitive writing of primeval man. Tribes of the North American Indians used, not so long ago a picture writing, which is of quite recent origin. Other North American tribes had an elaborate language, but no writing at all. Similarly Eskimos use a picture writing.

But we must be concerned with the early attempts at writing, and therefore seek our evidence, not on the perishable leather hides of Indian records, but where the archeo-

logists proved that primeval man really lived: the caves of paleolithic times. The estimates, (and modern archeology has evolved very accurate methods of measuring bygone years), point to an age about 50,000 years ago, a very short time indeed, compared with the millions of years of man's evolution. In other words, writing is only a very recent invention of modern man.

In scrutinizing the early writing of man in the older stone-age period, we must discern between real writing, the conveyance of ideas and happenings, and pictures only. And here, a great surprise is in store for us. We should believe that we could be able to trace down from paleolithic times to our times a series of pictures, showing us how man draw first crude outlines of things, until he learned to perfect his art. But the contrary is true. The very earliest cave paintings display a perfection, a skill, a vigour of representation, that modern archeologists and artists, simply refused to believe that these cave paintings of Altamira and other places in Spain and France are genuine.

Yet, the evidence is overwhelming, and so many caves have been found, that there cannot be any doubt to the fact that those early tribes in primeval Spain and France have experienced an outburst of creative expression. We may be tempted to describe this sudden appearance of great art in the earliest time of modern man as something miraculous and may well give a title "The miraculous Birth of Art" to a book, showing those marvellous drawings of paleolithic man.

Again, we shall not use the word "miraculous" in the narrow sense (contrary to nature) but in the wider sense, indicating an unexplained sudden manifestation of nature. We don't know what happened to these people, what climatic, or physical conditions brought about their sudden creative force, but there it is, undeniable, and for everyone to see.

When we go forward in the history of mankind, we come upon other outbursts of the creative mind. In my opinion (which is of no importance) the emergence of Greek culture is such an unexplained natural phenomenon. For everyone, who has studied Greek art, Greek literature, Greek science, Greek philosophy, and all the other manifestations of the "Greek Classic" time, which was about 2500 years ago, all this is a miracle. So far, it has not happened again, except for the period called the Renaissance (the re-birth of Greek culture), and what those wonderful Greeks achieved, has not yet been surpassed in many instances.

I could adorn my paragraphs with many quotations from eminent scholars, to support my views. I shall do this perhaps at a later date, because I believe that the content of this chapter, sketchily mapped out, would warrant a book for itself, profusely illustrated, and supported by the evidence and the sayings of prominent scientists.

Right now, we must contend ourselves with the fact, that those wonderful people of the Aurignacian period, who lived about 50,000 years ago, and who came so suddenly and miraculously on the scene of creative art, vanished as suddenly and as miraculously.

"Their art disappears from history with its creators, leaving no traces and no other result, whether because of some catastrophe or the natural process of decay, we are unable to say. Their efforts form the first attempts at art in the history of mankind and we are at present not able to follow them any later in time than the Magdalenian epoch" (M.H. Swinder, in "Ancient Painting")

The word "catastrophe" is mentioned in the above quotation, and we shall keep this word well in mind for our further speculations. However, we should take this word in its broadest meaning. A catastrophe in nature must not be understood to be only a destructive event. The Greek word catastrophē means to overturn; in other words, catastrophe means a sudden change only. Catastrophism is a scientific term in geology, and it means the doctrine, that changes in the earth surface have occurred suddenly. The term is also employed in zoology and botany, indicating a similar sudden change in the earth's flora and fauna. Moreover, there is another term "explosive evolution", used for instance by Raymond and others, to indicate a sudden expanse in the variety of species living at a certain geological period. This too falls under the term catastrophism. We shall use this term in coming paragraphs, and we should get familiar with its wider meaning. In view of the fact, that we do not find on earth an animal which is "half-human" or something between the apes and man, we may term the "miraculous" branching-off of man, that breaking through the "barrier" also a catastrophe, a sudden change in the factors governing life at a particular time, a "turn-over" according to the Greek term.

Those wonderful pictures in the caves of Spain and France (and also found in Africa) are "pictures", drawings depicting an event or only an animal. But they were no writing.

By writing we understand a certain set of symbol elements, whether they are pictographs, ideographs, or phonographs, which are operated according to a system to convey a train of thoughts, or of voiced thoughts in language. When we look for them, we find indeed among the pictures of hunts, of animals "arrangements of spots, dots, criss-crosses, spirals and other designs within rectangles" which do not resemble anything understood by a picture writing. Archeologists are of the opinion, that picture writing was preceded by these "linear" signs, which only remotely can be termed pictographs; they do not convey to us the picture of a thing, even in their roughest outlines.

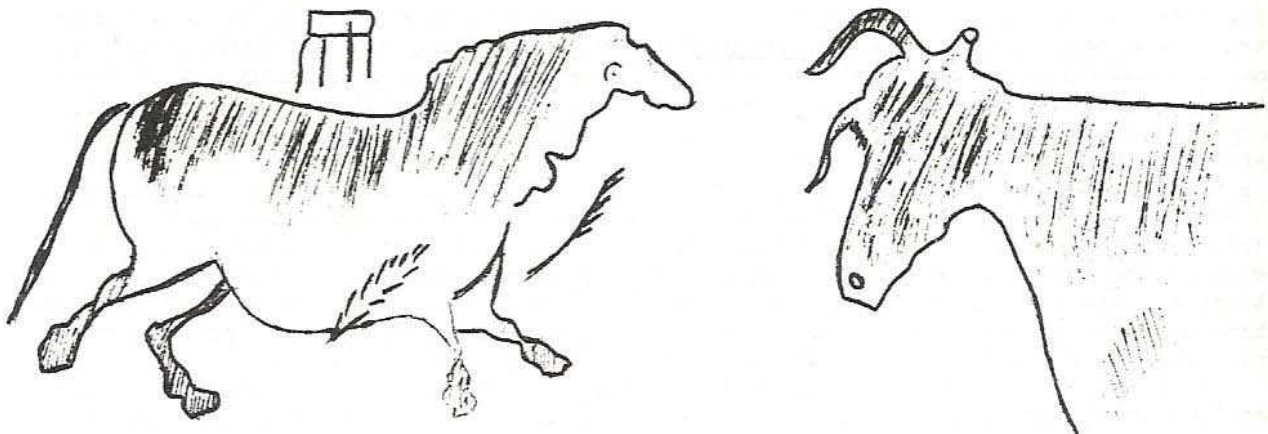
In a new book "Early Man" by Alan Houghton Brodrick (Hutchinson's Scientific and Technical Publications, London 1948), the author refers to these signs in the following words "When we come to the men of the Upper Paleolithic, to 'modern' men, we are face to face with beings who developed many of the essential attitudes since retained by mankind. And the men of the Upper Paleolithic must have possessed quite complicated languages. The intricate and conventionalised pictographic signs (to take only one instance) painted on cave wall and stones would be meaningless without a rather elaborate explanation in words."

This is a curious fact. We should assume that the earliest writing, should be most "primitive", most "simple". Instead we are confronted with "intricate" and "conventionalised" signs, which indicate a most complicated language.

Now, turn back to page 619, where I recounted the findings of Jespersen and other linguists about the languages of "primitive" people. Jespersen stated that these languages are most intricate, and very complicated. We see here a parallel between language and its written expression, writing, which may be very fruitful for future research. I wish at this instance to recall Jespersen's statements, that modern languages are a further step in the evolution of language, in so far as they discard irregularities and show the tendency to "freely and regularly combinable short elements". Extending this parallel to the ^{modern} picture writing, semantography, advocated in this book, we may say, that it does not have its ^{direct} antecedent in primeval times. It is a new stage in the evolution of writing.

All what I have said in the foregoing pages leads up to the "phantastic hypothesis", which I have announced in the title of this chapter. The reader may forgive the lengthy introduction, which I consider necessary for the full grasp of the statements to be made and the conclusion to be drawn from early writing. Actually, I should now present the reader with many illustrations of drawings in paleolithic caves, so that he may judge for himself. As this would make this chapter too long, I shall only bring two drawings from a cave, only recently discovered in France, during the war (September 1940). When the Allied troops liberated France, LIFE sent a whole outfit of photographers with all the necessary lights and power generators to that cave, and many readers may perhaps remember the many pictures in colours in an issue of LIFE.

In September 1940, a few lads from the small village of Montignac on the Vézère, went for a stroll in the neighbourhood. Near a half-ruined house called château de Lascaux, their dog disappeared in a hole. When they followed him, they discovered great caverns, the walls of which were covered with hundreds of pictures, depicting only animals. Herebelow is one picture, taken from the aforementioned book



A wall painting from the caves of Lascaux, discovered 1940
A mare in foal, attacked by arrows. Above a symbol. To the right a wild ox
(from the book "Early Man" by A. H. Brodrick, Hutchinson's Publications 1948)

As indicated before, this picture and all the other pictures are in colours. The primeval painter used earth paints, ochre, etc. and he achieved a marvellous three-dimensional effect, which has been much admired by artists. These pictures of Lascaux are similar to the wall paintings found in the caves of other places in France, and in Spain (Altamira and others).

With regard to the curious lines above the picture of the mare, Brodrick says that this symbol may be the picture of a trap or a snare. However, we shall hear more about these symbols, and we may then agree that the symbol depicted on the foregoing page, may be no pictograph at all, but a very intricate ideograph.

The Discovery and the phantastic Hypothesis

When I am now going to claim that I have made a discovery in archeology, the revelation of an astounding fact, up till now overlooked by most people (with the exception of a few who hinted at it) I must be ready to face, ridicule, abuse and worse. However, I am fortified with the knowledge, that the first discoverer of those wonderful cave paintings, was ridiculed, abused and vilified by many archeologists of his time. I shall give full particulars, when this chapter shall go to print. The facts however, are simple. Marquis de Sautuola went, searching for fossils in the caves near Santander in Spain. The year was 1879. Presently his daughter crouched beneath a rock, and looking up, cried in horror. She stood face to face with a ferociously looking bull. Her father running to her aid, stopped in amazement when he discovered that the bull was only a painting on the rock, but so vivid in pose and colours, that the real terror of the girl was justified. The man penetrated then further down the cave and discovered by the dim light of a candle picture after picture of animals.

When he made his discovery known to the world, scores of archeologists, painters, art connoisseurs and scientists came to see for themselves and they too stood in amazement before these great pieces of art, which could have been painted by great modern painters. And because of this high level of art, they did not believe the discoverer. They accused him of having staged a publicity stunt, and went even so far to assert, that he is an instrument of the Jesuits, who have secretly painted the caves, in order to discredit the then modern theories of the descent of man, which were contrary to the church doctrine. Surely if these paintings have been made by primitive men, they must have been on a very high level of civilisation, and not on a half-animal stage. The discoverer was broken hearted about all these incredible accusations.

But, when in later years other caves were discovered with similar paintings of high art, the archeologists, who have ridiculed and abused the first discoverer, had to admit, that the famous Altamira paintings were genuine.

This story gives me strength to proceed with my tale, and not to fear abuse. Moreover, I believe that the discovery which I made could only come about by a series of circumstances, which may well have been assembled for the first time in this order, namely that (1) a chemist, becomes interested in (2) ideographic writing, and starts to study the first writings (3) of primeval man. Moreover this chemist is (4) an adherent of, what Hogben calls Scientific Humanism, and he believes that human nature can be changed and that human nature has been changed in the past. This chemist knows that the body and brain of man is of chemical matter, and therefore subject to the organic and anorganic chemical "laws" of Nature. All these factors played their part. Of course, I am only an amateur, but I can point out that the sciences of Archeology, Paleontology and others, have been founded by amateurs, long before the official people of the universities rejected their findings. And as to the successes in these sciences, amateurs played a great and most honourable part.

Now, the reader may believe that what I have to say, can only be understood by archeologists, well versed in the matter. But no, the most uneducated man or woman should have no difficulty to understand what I have to say, and moreover to see the evidence for himself or herself.

And what I have to say is this:

All the cave paintings of paleolithic man, all those oldest records of man's writing and drawing, show animals, mamoths, bisons, antelopes, deers, and other beasts, and they show too, men hunting them with bow and arrows, with ax and spear, but not once do they depict men shooting arrows against other men. In other words

THE RECORDS OF PRIMEVAL MAN SHOW THAT HUMAN WARFARE WAS ABSENT 50,000 YEARS AGO.

In comparison the records of the last 10,000 years are primarily concerned with human warfare, with victories and defeats. The market places are full with the monuments of war.

Now this is very strange. We would not hesitate to assume that primeval man, the savage, roaming the forests and being beset by dangers and the threat of starvation, would be more savage than the savage of today; that he would be more "animalistic" and less "human" than the man of today. In other words; we should assume that human strife, the fight of man against man has been more ferocious, bestial, brutish, etc. etc. than the fights between modern, so-called civilised men. Yet, we don't find any evidence of greater bestiality, nay we do not find any evidence of war amongst men at all. Not one of those cave paintings show a fight between men,

It may be argued, that ^{only} few paintings have been discovered, and that in future time more and other paintings will be discovered which will depict human warfare. However, so far, many caves have been discovered, not only in Southern Europe, but also in Africa and elsewhere, belonging to paleolithic man, and not one picture has been found about war.

It may be argued that the absence of pictures about human warfare is not yet a valid proof, that human war was absent. But in this particular case, it is a valid proof, because the monumental records of the last 10,000 years, painted on walls, or hewn into stone are mostly about war, and the bragging about the victories of the victors over their adversaries. It seems as if

HUMAN NATURE HAS UNDERGONE A DECISIVE CHANGE DURING THE LAST 50,000 YEARS.

It cannot be argued, that the drawings of primeval man were too primitive. On the contrary, the evidence shows a remarkable gift of most realistic presentation.

It cannot be argued that primeval man was too primitive in his tools to wage war. Again the evidence points to the contrary. Primeval man waged war and most effectively. He used the bow and the arrow, the ax and the spear. Many of those pictures depicted warfare - not against the same species, but against the animals, which man needed for survival. Many pictures show animals attacked by men with bow and arrow, and animals wounded by these arms. The picture from Lascaux shown two pages before, shows a mare attacked by arrows. And it must be stressed that all pictures of Lascaux show animals. There is however one picture among the hundreds, which Brodrick calls the hunter tragedy, and which I shall sketch herebelow.



The Hunter Tragedy

Paleolithic wall painting in Lascaux, (discovered 1940) from Brodrick, "Early Man"

As said before, Brodrick counts this picture as the one exception, among all the others of Lascaux, which depict only animals. He interprets it as follows: "The hunter wounded the bison, (for his flank is transpierced with a spear) but not mortally. The bison gores his tormentor to death, but is in his turn ripped open by a rhinoceros (not shown in the above sketch). The beast staggers and from a wide wound in his belly his guts sag bloodily downwards. Scattered over the whole picture are designs, that Breuil does not hesitate, tentatively to call primitive "blasens" or perhaps "totemistic" signs. None is identical with another. There are arrangements of spots, dots, criss-crosses, spirals and other designs within triangles".

My sketch above is a very poor re-drawing from the photograph in black and white in Brodrick's book. And this black and white photograph itself is a poor representation of the real picture, which is in colours, which have withstood the decay and deterioration of about 50,000 years. And what is especially remarkable is the fact, that these wall paintings are not in shallow caves where the daylight can penetrate. They are situated deep down in the earth, and the early painter must not only have mixed his colours by the poor light of a fire, he had to draw the remarkable likenesses from imagination and from memory.

This makes the pictures even more outstanding.

The books on archeology and the history of painting, are full with speculations about the possible purpose of these wall paintings in remote caves. Brodrick remarks, that what an archeologist does not understand when interpreting the findings of the past, he attributes to some religious ritual. As we have read before, Breuil thinks that those linear signs are "religious" in nature. The pictures of animals are interpreted to have been made for the purpose of getting supernatural luck in hunting. The arrows, which are shown in the pictures to penetrate the flesh of the animals are interpreted as "wishful thinking", so to speak. And the whole caves were said to be religious ceremonial halls.

But why must we go so far in our speculation? Why cannot we restrict ourselves to a more simple interpretation? We could assume with ease, that certain of these early men found that they could draw the outline of things, that they indulged in this creative pastime, that they decorated the dwellings of their own or their chiefs, and that they depicted things of greatest interest to them. In their struggle for survival, nothing was of more interest, than those animals, which provided everything man needed, food, clothing, bones for tools, and even fuel for light. And these animals were all stronger than man, and only great cunning, and the skilled handling of weapons could secure a victory over them. Great must have been the joy in the caves when the hunters returned with their prey, and innumerable tales must have been told, about the moments of danger, and the final overcome of the beast.

And this is what the early painter recorded. Moreover we can find a similar simple explanation for those signs, "criss-crosses, spirals, and other designs within rectangles." Men have learned to adorn their tools and their weapons with such geometrical designs, and it may well be, that different designs were the marks of different men, somehow similar as with the signs for Indian chieftains. Those signs, found near the animal pictures may well be the signs of the men, who performed the great deed, and in whose honour the paintings were made to commemorate their great bravery and achievement.

The men of this period belong to the Cro-Magnon type, as classified by the archeologists. The skeletons show ^{of} a height of over 6 ft, and this fact, in connection with the wonderful art, which they displayed, has led to the belief of a super-race of tall, artistic, and highly civilised people. Judged from their pictures, their civilisation must have been remarkable.

But we find such pictures also in Africa, and there, the anatomical outline of the depicted men show distinctly that they are of negro stock. These bushman paintings or drawings show again only animals and men in hunting or other scenes, but nowhere do we find men shooting arrows against each other.

It should be understood, that I refer only to those drawings in those caves, which the archeologists attribute to paleolithic times, about 30,000 to 50,000 years ago. After studying modern methods in archeology for the determination of a period, I am full of admiration about the interpretation of insignificant items, which enable archeologists to measure time. These sediments are an open book to them, and they read them in much the same way as we read a calendar.

Many of these paleolithic pictures display the great cunning of the hunter in approaching his prey. There is a remarkable bushman painting, which shows a herd of ostriches. Approaching them is an ostrich, head erect, neck outstretched and vertical, just as the other ostriches in outline. However, you notice that its legs are man's legs, and beneath the plumage you see part of a bow and arrow, and the hand holding it. The hunter used this rigged-up carcass of an ostrich as a decoy to approach the herd.

Hunters with bows and arrows abound in these pictures, and there is one picture, which depicts only arrow shooters. However, these shooters are not depicted as shooting against each other. The whole arrangement is rather one of ornament. The ^{same} pattern of a hunter is repeated in different positions, that means, one figure is upside down ^{with regard} to the other, etc. I came across this picture in the book "The Arts of Mankind" by Hendrik Willem van Loon (George G. Harrap, London 1938) I am a great admirer of van Loon and of his Humanism, and I try desperately to copy his style of writing. Now, as his readers know, he can also draw and he does it remarkably well in his books. But his sketching is sometimes very sloppy. He has redrawn the above mentioned wall painting and gave it the explanatory title: "The creature is engaged in his customary pastime of killing his fellow men".

I was therefore very much interested to get a photograph of the original picture and I found one in a book on archeology. However, the author confirms my assertion and states that the picture does not indicate a fight of man against man. It is all an ornamental pattern. If my publisher will think it worthwhile, I shall bring a reproduction of the original and the comments of archeologists. Moreover, there is still the determination of age.

We may therefore safely state the fact: among the hundreds of caves of paleolithic man, among the thousands of drawings and paintings found there, we find no trace of war between man and man. And these drawings and paintings are solid documents, they do not consist of speculations only, written in some sort of language. They depict the real things. They are a truer writing than any phonetic writing, in which we can assert and prove anything, no matter how far removed ^{from} or how contrary to the real world.

Now, it may be argued that the absence of pictures pertaining to wars and victories in those paleolithic documents is no proof that war was absent then. However - in this particular instant, it may be recognised as a valid proof, if we compare those records on stone with the records of the last 10,000 years. These later records are mostly about wars, victors and victories.

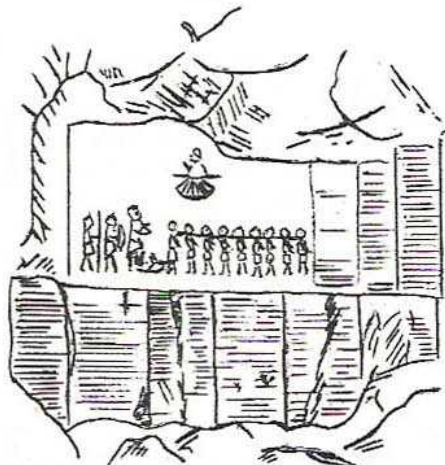
We have assumed that the paintings depicting animal hunts were memorials to commemorate heroic events. We may even use a slang word as explanation. Those primeval men liked to brag, to boast about their feats. In this, they closely resemble men of today, who like to brag and to tell fish stories, and tales of great hunts. And just as prehistoric men, we too cover the walls of our club houses with accounts and proofs of our victories over the animals.

But defeating a strong, but after all, dumb and stupid animal is nothing, compared with a fight of man against man, in which both rivals have to use all their intelligence, cunning and skill. A victory about an adversary - and how he is hated - is much more than a mere hunting victory. We may safely assume that prehistoric man would have written glowing accounts of such victories on the walls of his cave. Yet, they are totally absent.

On the other hand, they abound in the documents and monuments of later time. Apart from the temples for the deities, (which, too, are full with such documents and monuments) most of the great memorials in stone, in marble, in bronze or in any other medium are erected to brag and boast or let us say to commemorate the victors and their victories won by kings, emperors, generals and mercenaries over other kings, emperors, generals and mercenaries, and we find most horrible accounts of what has been done with the defeated soldiers and the conquered people.

As the writer H.H. Ewers aptly remarked, the countries are full with those bragging monuments. Wherever you go, into the great museums, the churches, temples, school houses and into the government offices and great halls, on the market places and on street corners, there they are in marble statues, in bronze monuments, as reliefs, or in wall paintings. And if you go into the houses of the people you find them again there in cheap reproductions. And you will find only the commemoration of victories. If you search the records of defeats, you have to go into that country, which caused the defeat of the neighbours, in other words, you have to look for the monuments of victories, which in turn mean the defeat of the conquered people.

And we find the same state of affairs, if we trace back our steps from modern time into historic time, which covers the last 7000 years (approximately). We find the same monuments, hailing the kings and their victories in ancient Rome, and Memphis, in buried Babylon and in forgotten Ninive. Take for instance that remarkable carving high up on a rock in Behistun.



The inaccessible, gigantic inscription on the rock in Behistun, commemorating the victories of Darius over his adversaries. To the right and below the picture are the columns, written in three different languages (from Clodd,)

For almost 2500 years this gigantic inscription (more than 20 ft in height) stood high up on a sheer cliff of more than 1600 ft in height at Behistun, about twenty miles from Kimanshah in Persia. Generations after generations of men came throughout the centuries, gazed up in marvel at the inscriptions, which they could not read. But what they could "read" was the picture. Actually, it tells the whole story. It depicts a king, bow in hand, and his armed soldiers behind him. His feet are on the prostrate and defeated enemy, and before him stand nine prisoners chained together by the neck.

It was clear what the picture should tell the coming generations: a great victory won by a great king over his adversaries. And to be sure, the king himself or his heirs had this great monument hewn in stone. We can't hear the other side, the defeated, and so we don't know on whose side the "just cause" was.

For almost 2500 years the inscriptions (over 1000 lines) could not be read, until about 100 years ago, a young British lieutenant Henry Rawlinson was sent out to Persia. His attention was soon focused on the gigantic rock writing in Behistun, and he was determined to decipher it. He used long ladders, bound together with ropes, to reach the inscription. Edward Clodd writes in "The Story of the Alphabet" (D. Appleton-Century Co. New York, London 1938):

"At the risk of life and limb he climbed the face of the steep cliff to make copies of such portions of the inscriptions as were accessible with the means at his command, and after a series of efforts, continued at intervals through several years, he finally secured a complete transcript of so much of the writing as time has left uninjured. The inscription is in three languages - Babylonian, Mede or Scythian, and Persian - arranged in parallel columns containing above one thousand lines. It commemorates "the life and acts of Darius Hystaspes, his conquests, and the nations under his sway." Bas-reliefs portray that monarch, bow in hand sitting with his feet on the prostrate usurper, Gaumates, while a train of nine rebel princes, whose names are inscribed above their effigies, stand before the "king of kings" chained together by the neck. Two of the monarch's soldiers are in the rear. Over Gaumates is written: "This is Gaumates, the Magian; he lied; he said, I am Smerdis, son of Cyrus." The same formula occurs over the heads of each of the nine captives. "This is (M); he lied; he said he was king of (N)." The inscription begins with a solemn invocation to Ormuzd, the old Persian god of light and purity, and passes on to detail the claim of Darius to the throne of the Achaemenids and the possessions of the Persian crown. It tells of the defeat of Smerdis, and the revolt of Susiana, a province lying between Persia and Babylonia. "I sent thither an army, and the rebel Atrina was brought in chains before me; I slew him." The same story is narrated concerning other rebellious subjects. Of one Phraortes, it is told that his nose, ears, and tongue were cut off, and that he was "crucified at Ecbatana, together with his accomplices." Then the inscription proceeds:

"King Darius saith: These countries rebelled against my power. By lies they were separated from me. The men thou seest here deceived my people. My army took them, according to my orders. King Darius saith: Oh, thou that shalt be king hereafter, see that thou are not guilty of deceit. Him that is wicked, judge as he should be judged, and if thou reignest thus thy kingdom will be great." (Transactions of Royal Asiatic Society, also Life of Sir Henry Rawlinson)

I have devoted much space to this famous rock inscription for two reasons: the one is to show to the reader what an exciting subject the study of the history of language and of writing is. The achievement of Rawlinson is outstanding, as great as the decipherment of the Rosetta Stone. I would say, that the achievement is even greater, considering the difficulties involved. In the Rosetta stone, which provided the key for the decipherment of the hieroglyphics of old Egypt, one of the three inscriptions was in Greek, which was very well known.

The other, and the more important reason why I enlarged on this inscription was to show to what length conquerors went to have their boasting and bragging preserved for coming thousands of years. The pictures and the inscriptions show too, the insane cruelty inflicted upon the conquered. The words reveal the nauseating hypocrisy in the words: deceived, lies, guilty, wicked, judged, etc. Bear these words in mind for the coming paragraphs, and remember the treatment which these words receive in the symbols of semantography.

Actually, Darius was the usurper, and it was this fact, which first led to the decipherment of the Behistun inscription, and in turn to the decipherment of the tablets written in the Babylonian cuneiform writing. The archeologists which preceded Rawlinson, among them especially Niebuhr, Muentzer, de Sacy and Grotefend had made the first guesses.

The old records, written in Semitic languages, in which kings told of their feats, start usually with the following words

I, A----, King of Kings, son of B----, King of Kings, did this and this..

It is clear, that B is the father of A, and furthermore that B was a king too. But if the double characters KING-KINGS do not appear behind the name of the father, than it is obvious, that he was not a king, and that his son assumed kingship. Grotefend now searched the history books and especially the records of Herodotus and Xenophon about the history of ancient Persia, and, sure enough, he found the king, who fitted in the inscription: Darius, whose father Hystaspes was not a king, but a satrap only under Cambyses. So, Grotefend correctly guessed the name of the king, and supplied Rawlinson with the first key for the decipherment of the phonetic cuneiform characters.

The great majority of ancient records follow similar lines as the one of Behistun: records about war and victories, and if we compare these records on stony walls with the records of the cavemen, we can't help drawing the conclusion, that either human warfare was absent some 50,000 years ago, or if it existed, the victors did not find it necessary to brag about, although they bragged about victories over animals. As this latter possibility is less likely, we must face the idea, or hunch, or hypothesis, or theory (because supported by ancient records) that

THE HORDES OF PREHISTORIC MAN MAY HAVE LIVED IN PEACE WITH EACH OTHER.

Now, this conclusion may be considered crazy, improbable and contrary to all our convictions about what we believe to know of evolution, civilisation and human progress. I was dumbfounded when this thought struck me, after studying the records of paleolithic man. Frantically I searched all the books on archeology, art, writing, history with the same result. Then I found that some scientists have known it for a long time:

"The prehistoric age, which extends over tens of thousands of years down to about 5000 B.C. enjoys a fairly pacific reputation."

W.P. Paterson (13)

"It is doubtful, if serious war was known in Europe until the Bronze Age was established."

C.F. Scott, Prehistoric Man and History (14)

These two estimates tally, because the Bronze Age is estimated to have begun about 3500 B.C.

Unfortunately, I could not get hold of the original works of these two scientists. I found the above quotations in an encyclopedic article on War (14), but I am sure, that other quotations of other scientists, who came to the same conclusion, could be found.

The whole idea, if contemplated in all its consequences and implications, is breathtaking, overwhelming, and most upsetting. Moreover, it is a slap in the face of all people, who at all times defended and excused war. They maintained that war is an integral part and feature of nature, in which one living thing makes war on other living things. War is a feature of human nature, and "you can't change human nature".

Possibly, this ingrained conviction accounts for the fact, that the discovery of men of science mentioned above was disregarded, overlooked, forgotten, without anyone drawing the conclusions. And probably these men were themselves not so sure:

"War has been one of the most constant and distinctive features of human history and it may even be thought to be a sinister peculiarity of the human species that hordes should pursue hordes of the same kind with a persistent purpose of rapine and destruction."

W.P. Paterson (13)

But apparently, it was not always so. The same W.P. Paterson came to the conclusion, and no doubt, on account of the prehistoric records, that

"The prehistoric age, which extends over tens of thousands of years down to about 5000, B.C. enjoys a fairly pacific reputation."

In other words, war is only a recent innovation. Human hordes may have dwelt in peace through many many years down to paleolithic times and later. Only "recently" in "historic" times did they start to kill each other.

The division in "prehistoric" and "historic" times is usually made. The "historic" time starts about 7000 years ago, that is 5000 B.C. Only since then have we an abundance of records. It seems to me that somewhere, very likely around 10,000 to 15,000 years ago there is a great gap with regard to records. We shall return to this gap later on.

You can imagine my feelings when I contemplated all these thoughts. I was profoundly disturbed and shaken in many of my beliefs. As with most intellectuals of my time, I be-

lieved that Darwin has furnished the explanation of war, as a natural device to eliminate the weak for the survival of the fittest.

But in the meantime, I have come across Professor Wilson's book, who successfully challenged Darwin's assumption that the difference between man and the animal is only one of degree, and not one of kind. I have tried to give an outline of Wilson's book in the preceding pages, and I have urged the reader to read his book. Wilson brings the convincing theory, that the confusion started because of a mix-up between resemblance and identity of power. The intelligence of the ape resembles the intelligence of man, but is not identical with it, whereas between the most backward savage, the Fuegian and civilised man, there is identity of power. (see p. 624 of this book)

"May be," I pondered, "that a similar mix-up has occurred." May be that the war among the species resembles only, but is not identical with war among the human species. And the quotation from Paterson, furnished the thread for further deductions.

Paterson said (see foregoing page) that

"it may even be thought to be a sinister peculiarity of the human species that hordes should pursue hordes of the same kind with a persistent purpose of rapine and destruction."

Why, here is the clue. Yes, there is war among different species in nature, and the paleolithic drawings record war of the species man against the species mammoth, bison, antelope, and others, but do not record war amongst the same species - there is no war among the same species in nature. Tigers don't kill tigers, wolves don't kill wolves, rattlesnakes don't kill rattlesnakes and even cholera bacilli don't kill each other. Only men kill men. But they didn't do it until "recently"!!!

Take for instance wolves. In summer, they live in the forests. There they find enough food, and you don't hear them howl. There may be an occasional snarl and a fight of two male wolves about a female, but in all such scraps, there is no intention to kill, and the defeated competitor withdraws growling and forgets about it.

Then comes the winter. Deep snow covers the ground and there is nothing to eat. Then the hunger ravages in their intestines and almost mad they run in packs in search of food and howl of unbearable hunger. They attack all other species which they encounter, but they find little and so their ravenous hunger and their howling continues.

But how easy could they satisfy their hunger. Just one leap on one of their fellow wolves, just one bite in the neck of one of their brothers and there would be enough food for a time for all of them. But they don't do it. If one of them is shot dead, then they have no hesitation to still their hunger. But as long as he is alive and one of their fraternity, no brother wolf will kill a brother.

What is this "natural law" within them, which prevents them from killing each other, even if they are beyond their senses of unbearable hunger? After all, they have no moral code, no ten commandments, no law, no police, nothing which could in any way prevent them to jump on another wolf, if they can't bear the hunger any more. Yet, they don't do it. Together - as fellow-brother-wolves - together they hunger, together they howl and together they starve. Wolves don't kill wolves, lions don't kill lions, hawks don't kill hawks - in short: no animal species makes war on each other. It is an iron law of nature.

But man - distinct from the animals - man kills man, with or even without a purpose. Without a purpose in insane wars of destruction, with a purpose, whenever man has a purpose and another man stands between, and ^{ing}kill seems the only solution. And he will not only kill his fellow-brother, he will eat him, when hunger ravages his intestines. Starving on a raft in the ocean, or on a lonely barren island, they have for thousands of years, and down to world war II killed their fellow man and eaten him. They have not acted like wolves or all the other dumb brutes, which "animalistically" respect the life of their fellow brother.

At this instance, I wish to refer to a discovery made by the archeologists. The reader himself, may draw the conclusion.

The prehistoric time is roughly divided into paleolithic and neolithic time, which translated, means old stone age and new stone age. The division is made according to their "artefacts", their tools, which consisted mostly of flint chips, roughly chipped in paleolithic times and polished in neo-lithic times. Of course, the various archeologists discern an Upper and an Lower Paleolithic time, and middle periods between these times and the neolithic period. But the rough distinction is universally accepted, and the paleolithic time is said to have been 30,000 to 50,000 years ago, whereas the neolithic time was about 10,000 to 15,000 years ago.

Now, the most important item which archeologists are looking for, are bones. Consequently the interment places and the kitchen refuse heaps are very carefully searched. In those refuse heaps, which have grown during the centuries, they find bones of animals and birds, and most of these bones are broken, to extract the marrow.

In the kitchen refuse heaps of neolithic ^{only} man, they found human bones, broken in the same way to extract the marrow, and mingled with similarly broken bones of animals. Some archeologists conclude that this indicates cannibalism, and moreover, that cannibalism was absent in the paleolithic period, just as human fight is absent in paleolithic pictures. So something must have happened in between, which made man a cannibal and a killer of his own species.

You will surely understand that I was haunted by all these conclusions, and I searched the books on biology and zoology to find out, whether war among the same species is absent throughout the animal kingdom. And there I found accounts of ants waging war against each other. And so I studied what I could find about ants. I shall refrain here from quoting from books, but I shall supply all the evidence, if my publisher thinks that all this should be told in a more elaborate form. I shall therefore only refer to what I have read in different books.

First of all, there are ants and ants. What we think is only one species, are in fact a variety of thousands of different species, very much different in size, and in structure, in behaviour and in social organisation. And most of these thousands of species do not fight each other. Only a few species do fight, and here again, they are different; brown ants will fight black ants, etc. Moreover, most of the observations recorded, have been artificially instigated. The observer took two groups of ants belonging to different species (or subspecies) and threw them ⁱⁿ a sack, shook this sack to ensure complete mixture and then emptied the sack onto the ground. The dazed ants began to fight. In nature, such violent mixing never happens, and therefore there is usually no ground for such fights.

However, observers state that certain species of ants (only a few as stated above) fight and they even carry the captives ^{to} captivity. But the observers record also an amazing thing. Those captives, easily distinguishable by their different colour, remain in their new state, go out in search for food and return in complete freedom. Moreover, in a later fight, they fight on the side of their new countrymen.

It might be necessary - if these new ideas are followed and more closely examined - to re-examine all observations about the behaviour of ants. But even if it should be established beyond doubt, ~~that~~ ants of a few species fight each other - and this proof is not yet securely ascertained - even then it would not be necessary to revise the hypothesis brought forward in these pages. We might then say, that war amongst the same species is absent among the animals, the birds, the fish, and the insects, with the sole exception of the species homo and a few species of ants.

Now let us consider the position of ants in the evolution of life on earth. It may be said, that the evolution with regard to living beings of highest intelligence went at a time ⁱⁿ the direction of developing the ant to become the crown of creation on earth. In certain regions of Brazil, the ants are in control of the land, and if they decide to take over a house laying in their path, the best thing human beings can do, is to abandon this house. Fighting is useless.

Now, we know that among many species of ants there exists a social order of admirable and even miraculous conception. They use ^{larvae as} tools in a most ingenious way, they have cattle, certain insects, which produce a sweet secretion, very much ^{is} liked by the ants. They even have agriculture. They tend small plots of land and raise a kind of mould, which they eat. Moreover, they must have an elaborate gesture of better "feeler" language. Everyone can observe the working ^{of} ^{this} language, when following a trail of ants going to and fro along a path to the sugar bowl in the kitchen. Kill one of them on this path. The next ant coming upon the body of his fellow will turn, and in running back, will touch and inform the other oncoming ants, and they too will turn back and flee.

In short, ants show a high intelligence, much higher than any other animal species, which have no cattle, no agriculture and no tools. Whatever the outcome of this enquiry may be, we may safely assume, that the species man and perhaps also the second most intelligent species on earth, certain ants, indulge in making war on each other. However, up till now, this is not yet fully proved with regard to the ants, and we are only sure that this madness exists with the species man.

All this what I have said may seem crazy and I have had my experiences with my friends. When I told them about my findings and conclusions, they looked at me with disturbed eyes, asking themselves, whether I have gone Cuckoo, out of my mind, or just cranky. But when I asked them to tell me what species in the animal kingdom makes war against itself, they started to stammer and gave almost angry and evasive answers. Then I showed them ^{books with} pictures drawn by paleolithic man, showing men hunting animals with bows and arrows, spears and axes and asked them to find one picture, depicting men hunting and shooting other men. They shrugged their shoulders, and dismissed all my talk as nonsense. Why, the scientists would have found it out long ago, if there would be some truth in my hypothesis. When I told them that modern scientists have altered and even rejected some of Darwin's theories, and they now generally assume that man did not descend from the ape, but had only a common ancestor, and that we have not the slightest idea under what circumstances this miraculous branching-off of man occurred, my friends looked disturbed, as if I had just destroyed their Gods, in which they so fervently believed.

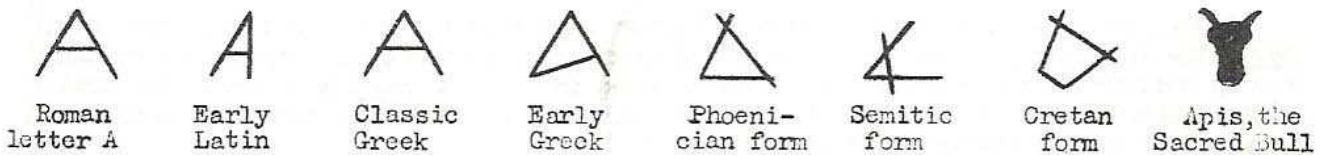
And I maintain that the reader does not need to be a specialist or a scientist, to see for himself, and then draw the tentative conclusion: yes, it is a curious fact that only man kills other men, and that in the whole animal kingdom, there exist an "iron moral law of nature" which "forbids" wolves to kill wolves, tigers to kill tigers, etc. etc.

And if, what I assert, prehistoric drawings do not show any signs of human warfare, than the other tentative conclusion may be drawn, that some 50,000 years ago, that "iron moral law of nature" was valid also for the human species.

Well, then something must have happened in between, something which profoundly changed human nature, or let us say, the human brain, and this change must have occurred gradually or suddenly about 30,000 - 20,000 years ago. If this wild assumption has some truth in it, we should find some hints in the records of those times. To find out, let us study the ancient records, the ancient writings. And in this book, which deals with picture writing, such an enquiry has its place.

And now the reader, who is not an archeologist, is in for a shock, I am going to destroy a common belief, and I ask the interest^{ed} reader to follow me patiently through the coming paragraphs, although they may seem to be disconnected with the matter in debate.

Scientists are of the opinion that our present alphabet, and phonetic writing emerged from an ancient picture writing, and this seems to be true. Take for instance the development of our first letter A. Let us trace its form back into antiquity.

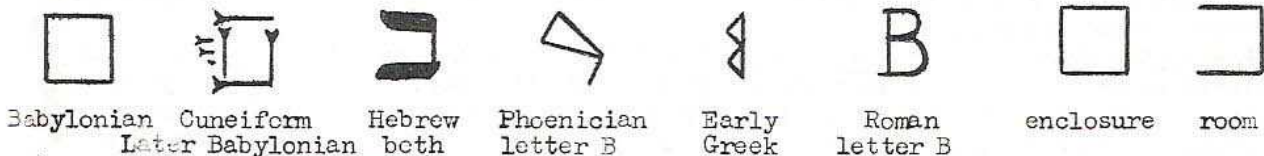


We may agree that the outline of a bull's head is still discernible, (although in an upside-down position) in the letter A.

And now let us look at an alphabet, which has not changed during the last thousands of years, and is still in use in ^{in modern Hebrew and} American dailies and a ^{modern} great literature, written in ^{Hebrew and in} the medieval German, called Yiddish; the Hebrew alphabet. We know that it seems to be derived from the Phoenician alphabet. The first letter aleph, corresponding to the Greek alpha and the Roman and our present-day A, means even today an ox, and below you can easily discern the vigorous body of an ox with front legs, straightened body, and tail.

The second letter beth, corresponding to the Greek beta, and our B, means ^{Hebrew} aleph (ox) house, as in Beth-lehem (House of Bread). In writing the letter down, I realise right now, that my semantographic symbol for room, derived from the symbol for enclosure is an exact replica of the old symbol. And in fact, ancient and modern mud dwellings (or open shelters at tram and train stops) look somewhat alike.

Semantography



These 3 signs mean a house (from The Romance of the Alphabet, by A.B. Allen, Warne, London)

Now, the Hebrew alphabet is a step "backward" so to speak. Firstly, some of its letters still show some pictorial outline. Secondly, whereas the letter B standing and pronounced by itself, has no meaning in modern languages, in Hebrew the pronunciation of this letter still means a house. However, this is valid only in the spoken Hebrew language, but not more in the written language. In writing, the Hebrew letter beth stands only for B, and if we want to write down beth, we must use 3 letters B-E-S to get the word for house. In the following drawing the succession of the letters B-E-S is written S-E-B, because Hebrew is read from right to left.



S E B the Hebrew word BES (beth) for House
 ← read this way BES

Now, we are going to examine a writing which is still more "backward", the Chinese writing. Scientists are of the opinion, that the development of Chinese writing from a pure pictographic to a pure phonetic writing has been arrested. This gives us a good opportunity to see a writing, which is still in the transitory stage.

Chinese writing is not a pure pictographic writing. It is a curious mixture of pictographs, of ideographs, of combined phono-ideographs, of pure syllabic phonographs, and even single letters (pure phonetic). In view of the fact, that we can observe similar transitory stages in the development of other ancient writings and alphabets, it is important to have a look at the various stages in modern Chinese writing. Let us take for instance the character for the meaning horse, pronounced in Shanghai speech MA.

picto-graph	picto-ideo-graph	ideo-graph	phono-picto-graph	phono-ideo-graph	phono-graph
MA	MU	CHUNG	MA	MA	MA
horse	wood (picture of tree)	insect	clamp, crosspiece (indicator; wood)	leech (indicator; insect)	pure syllable

If you have some imagination, you may discern in the conventionalised character for horse, the four legs, and the tail, perhaps the mane too. In the second character we can easily discern a tree; but this character is used to indicate wood in general, the tree picture should give us the idea of wood. In the third character we cannot discern an insect. It's a pure ideograph, at this stage.

Now, the Chinese language is mono-syllabic, that means that each word has only one syllable. If we consider all possible monosyllables as for instance MA, ME, MI, MO, MU, etc. we arrive at about 400 possible variations, which is much too little for the many thousand of words. Therefore, in Chinese there are of necessity a great many homophones (words which are pronounced alike, but which mean very different things). There are, for instance, more than 50 different LI's, and of course many MA's. At a certain stage in history, the scholars began to combine their characters, to indicate the sound and the meaning. For instance the word for clamp, crosspiece is pronounced exactly like the word for horse: MA.

To indicate this, the scholar drew the character for horse on the right side, to indicate the phonetic pronunciation. But - in order to indicate that the character does not mean a horse, but something wooden, the character for wood was put before the character for MA (horse). We have therefore the meaning on the left, the pronunciation on the right.

The same applies to the next combined character. A leech is not exactly an insect, but something which lives and crawls on the ground; so the character on the left indicates such a living being, and the character on the right indicates only the pronunciation MA, and by no means a horse.

Lastly, the character for horse is used to indicate no meaning at all, but only the syllable MA, as for instance in a name. Consequently all names, especially foreign names, which have the syllable MA are written with the character horse, as for instance in MA-NI-LA, or MA-C-DO-NALD, or MA-RY. The other syllables are indicated by other characters.

If a Chinese sees such a series of characters in a newspaper, he does not grasp the meaning immediately, because the combination is senseless. Only then does he realise that

the characters do not convey any meaning, but are only phonetic "letters" for a foreign name. When General Marshal was sent to China by President Truman, to negotiate a peace between the nationalists and the communists, the Chinese newspapers gave him the name of MA-SHA, just as they heard it pronounced. The two characters employed, meant "Waiting Horse", but there was no acrimonious meaning intended, although in fact Marshal's patience was put to a severe test.

But Chinese themselves, who are addressed "Mr. Ma", have in most cases, the horse character on their visit cards. However, the Chinese, like a joke, and sometimes they laugh about silly combinations. But usually, they don't give ^{them} a second thought. Every foreigner who arrives in China, and passes before an official is asked for his name, and the official writes it down in characters according to its pronunciation. He usually does not bother what characters he uses, but some, like the horse character is constantly used for MA.

When I came to China, the official gave me the following name:

My first Chinese name:

	北	力	士
	P	LI	S
Meaning:	North	Force	Master

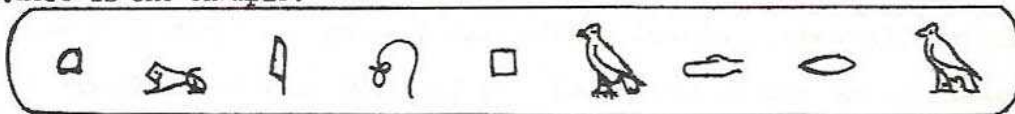
The first character is found in the name of Peking, which means Northern Capital, whereas Nan-king means Southern Capital. But I didn't like my Chinese name at all. Firstly, the first letter is pronounced as a hard P, whereas my name should commence with a soft B. Moreover, the whole combination could be interpreted as Nordic Lord of Force, a frightful hint of Adolf Hitler. So I hastened to have a nicer name, and a professor of Hangchow Christian College gave me one, better in pronunciation and finer in meaning:

My second Chinese name:

	畢	立	時
	B	LI	SS
Meaning:	The learned One, standing (in the) Time		

which means "going with the time", being "up-to-date". This name I liked, and there were many opportunities at which Chinese expressed satisfaction about my nice name, being very much in contrast to the silly names of most foreigners.

In this last example we have seen Chinese characters used as pure alphabetical letters, and now, after having had a glimpse of the state of affairs in Chinese picture writing, which, as we have seen is not a picture writing any more, let us have a look at one of the most wonderful writings, ever devised by man, the writing of a wonderful people: the Egyptians. Here is one example:



Egyptian Hieroglyphics

quadrant	lion	reed	knotted cord	shut- ter	eagle	hand	mouth	eagle
----------	------	------	-----------------	--------------	-------	------	-------	-------

Anyone who has ever had an opportunity to stand before an Egyptian museum piece must have marvelled about the beautiful execution of all these pictures, so sharp and nicely drawn and so easily discernible as the pictures of real things. If ever there was a real "picture writing" here is one, the best, which human beings have evolved.

Yet we are mistaken. The Egyptian hieroglyphics are no "picture writing" at all. They are a pure alphabetical writing, each picture standing for a phonetic sound; in other words the above characters are no pictures, but alphabetical letters, namely:

K	L	E	O	P	A	T	R	A
---	---	---	---	---	---	---	---	---

Translation of the above hieroglyphic "pictures"

This is surely a surprise for many and it was a great surprise for me. But we are not yet at the end of our story.

We may say, that, after all, Cleopatra was only a "recent" dame. She lived only from 69 - 30 B.C. a mere 2000 years ago. At that time, we may argue, the Egyptian writing was already at the final stage, a pure phonetic alphabetical writing. In order to find the transitional stages, we simply have to go back in the preceding centuries. Then we will find Egyptian writing as an ideographic writing, with some phonetic signs and further on, only a pictorial writing, similar to the development which we have observed in Chinese writing.

Well, when we go back through the thousands of years, and reach the limit of prehistoric time, some 5000 B.C. or about 7000 years ago, what do we find? This is a long stretch of history, from the first Egyptian king of the first dynasty, Menes (fixed by Dr. Flinders Petrie at 4777 B.C.) down to Cleopatra.

The very oldest Egyptian documents, dated at about 5000 B.C. show again only a phonetic alphabetical writing. There was basically no change. William A. Mason writes in "A History of the Art of Writing" (MacMillan Co. New York, 1920):

"That we cannot find any transitional stage of pictography or ideography antecedent to the alphabetic stage is no valid argument against the development of the latter signs out of the former; but rather an evidence of the immense age of Egyptian civilization, through the farthest stretches of which much doubtless has been lost".

In other words, we could not find the documents of earlier ages in Egyptian civilization. There is a gap. Somehow the wonderful records of this wonderful people break off when we try to follow them beyond 5000 B.C. What happened before?

So far as I see, the same can be said of other civilisations, and therefore the time 5000 B.C. is set as the limit of historic time. Beyond that, we don't know what happened. And if you compare this fact with the quotations of Paterson and Scott (see p. 634) about the prehistoric age, we must be drawn to the conclusion that a marked change has occurred somewhere around 30,000 - 5,000 B.C.

I believe therefore, that we must re-examine the prehistoric records in the light of the hypothesis brought forward in these pages. The fact, that the highly cultured and advanced Egyptian records stop so abruptly at about 5000 B.C. must at least drive us on to speculate about possible causes. In such speculations the physicist, the climatologist, the biologist, the archeologist and last, but not least the chemist, must have their say. We shall return to this point later on.

The few paragraphs about Egyptian writing show that a great chapter is necessary to explain to the layman this grandiose chapter of human writing. There is much to say, which cannot be said here, about the subtle changes, about the development of Egyptian hieratic writing (a sloppy hand writing of the hieroglyphic pictures) and demotic writing (a further simplified short hand writing). The Rosetta stone, carried 3 inscriptions, written in hieroglyphics, demotic and Greek). This story is of great romance, and the decipherment of the Rosetta stone and the opening-up of the wonderful records of ancient Egypt, must be considered as one of the great epics of human achievement.

And there is another very interesting fact, revealed in the hieroglyphics, which should silence all those critics, who may say, that semantography, the modern "picture writing" proposed in this book, is a step backward, a going back to primitive times. It is nothing of the sort.

As we have seen, even the oldest dated records of Egypt, of about 5000 B.C. are alphabetical. Now, the Egyptian kings have surely build their monuments for eternity, and the writers of say 3000 B.C. had the monuments of 5000 B.C. before their eyes. They must have become aware of the fact, that pronunciation changes in a language. Moreover their language was full of homophones (words of the same sound but of different meanings) as any other language. In English, the words match or board mean very different things. So the Egyptian writers were confronted with a difficult task. On the one hand, their monuments should be written in the language of the day. On the other hand, people of later centuries may misunderstand the words, as their language and the meanings would undergo changes. But even in the language of the day there are the homophones. The Egyptian word ab means dancing, but it means also thirst. The word apt means judgement but also duck, and also measure. (from Mason, History of Writing, see above).

What did the Egyptian scribes, with their "alphabetical" writing, do to bridge the differences in language and meaning? They invented their own semantography.

In order that the meaning should be clear, they added a picture after the alphabetical word (written in pictures, which denoted letters). "When ab was used to indicate "dancing", the picture of a girl dancing^{was added} after the phonetic characters, a reed and a leg. When ab was used to indicate the meaning "thirst", three determinative ideograms were appended; first a dog jumping up, then the symbol for water, and then a man pointing to his mouth" (Mason)

We see here, the re-introduction of pictorial characters at a stage, when alphabetical writing was fully developed.

Hieroglyphic writing was highly ornamental, and therefore many different pictures were employed to indicate the same sound letter. For instance the L was indicated by the picture of the lion (labo in their language), but also by the picture of a lotus. In men's names the lion was preferred to indicate the letter L, whereas women preferred the lotus picture. As we have seen Cleopatra preferred the way of men. "There were twenty different A's to choose from, thirty H's, and many different duplicates of nearly every letter in their alphabet." (Mason)

The Bible as historical document.

From the writings of the Egyptians, we may change over to the writings of the early Hebrew, not to study the development of Hebrew alphabet, but to seek a possible hint to the happenings in prehistoric time. No one will deny that the Bible is a true document of antiquity, that the recordings of historical events have^{been} proved to be correct, that the Bible is written in poetical words, and that the moral laws expounded there, have become the basis of present-day civilisation.

From the historical point of view, the Bible furnishes only records going back for not more than^{about} 6000 years ago, and we see a similar parallel in the limits of Egyptian records. What happened before that time is told only in allegorical words, the story of Creation, the story of the deluge, etc., etc.

But Professor Wilson pointed out, that the hints to prehistoric times in the Bible bear great significance. He contends that, the story of the Bible^{which} the modern child of ten years will still accept at literal face value, which the man of twenty, who puts away childish things, will reject, and which the philosopher of forty, who has grown in discernment as well as in knowledge, will re-accept with some surprise at the amount of factual truth contained in it. Wilson, of course, adds that things did not actually happen as told, but the old account has still significance for the scientist.

From this point of view, the most rabid unbeliever will agree that the creation of life^{on earth} was performed in stages, and that the creation of man came about in a quite recent stage. As shown in previous pages, modern scientists think today that man is unique^{different} and from the ape, and that his language is unique and different from the cries of the animals. And Prof. Wilson says, that the Hebrew narrator indicated this by telling that Adam gave names to the beasts and to the birds. Adam thus became the classifier. And so far, this allegoric account seems to tally^{with} what modern science has revealed about the emergence of man and of language.

I was greatly intrigued by Wilson's demonstration and following the trend of thoughts expounded in the foregoing pages, I looked into the stories of prehistoric time, told in the Bible, for some hint to some event, which perverted the thoughts of human beings, drove them to wage war against each other, and thus ended the paradisaical time of prehistoric man, who about 50,000 years ago, did not know^{of} warfare among his species.

I shall expose myself to ridicule, but I have fortified myself against this attack, and I shall soon reveal how. The reader is kindly asked to withhold judgement until the final paragraph has been read. Just as Prof. Wilson, I want to point out, that the story in the Bible should be taken only as a hint to some happening, clad in an allegorical story by a primitive people, which from generation to generation had inherited a dim recollection of a great flood or some other momentous event, when man "was driven out of the paradise".

Before that time, man was the classifier, then he became the adjudicator. He began to judge his fellow men as being either good or evil, and this indeed increased his misery a hundredfold. The difficulties presented by nature are small, compared with the difficulties which we inflict upon each other daily and hourly, in our house and in our country, and everywhere. And we fight each other in the name of good or evil with small "weapons" and then with real guns, mortars and bombs.

Yes, we could live in peace with each other. There is enough space and food for everybody, but our minds are warped. We pursue each other, and inflict untold miseries on ourselves, until - until we might be able to find a way to cure our perverted minds.

This is not my idea, but the saying of a great psychiatrist, whom I shall quote at much length in this chapter, Dr. G. B. Chisholm, Deputy Minister of Health, Canada, and now with the United Nations.

And Dr. Chisholm thinks that the treatment must have at its aim, the "state of mind" in man, prior to that momentous event, recorded in the Bible. In his own words

"In the old Hebrew story God warns the first man and woman to have nothing to do with good and evil"

This is how the Hebrew narrator tells his allegorical story: (Chapter 2, 15-17)

And the LORD God took the man and put him into the garden of Eden to dress it and to keep it.

And the LORD God commanded the man, saying, Of every tree of the garden thou mayest freely eat.

But of the tree of the knowledge of good and evil, thou shalt not eat of it; for in the day thou eatest thereof thou shalt surely die.

But Adam acted contrary to God's command. And the days, when human hordes lived in peace with each other, ended. War began.

Before we hear what Dr. Chisholm has to say, let us contemplate the magnitude of the problem and the implications involved. We may safely assume that most of our miseries of today are caused by that human perversion; strife and war among our own species. The miseries caused by an occasional flood, famine, earthquake, tornado are negligible. There is food and living space and consequently happiness in abundance for all human beings on earth, - if they would only dwell in peace with each other. But that perversion of the human mind, makes us hate and persecute each other with occasional killings, until a general war among two or more countries brings utter destruction and death to millions.

This insane perversion has all the appearance of a disease. It has attacked only one species, homo sapiens, and there are even some gentle creatures among it, who are immune and free of it. But of all the features of a disease, it is only of a temporary nature. It may smoulder on in a mild form for a time, and it may break out in a devastating plague, spreading like wildfire and attacking even the sanest brains until all reason is lost and wholesale butchering ravages the countries.

But the most phantastic thought is - the disease was non-existent, perhaps for millions of years, perhaps since man emerged. It seems that the disease broke out only "recently", perhaps during the last 50,000 years, and - incredible thought - it may disappear again, or better, we can make it disappear.

Now this is not a metaphorical analogy. Psychiatrists will tell us, that all symptoms of hate, persecution, fight and killing are symptoms of a mental disturbance. And this thought should give us hope, because we have already learned how to combat diseases, how to check plagues and how to inoculate people against another outbreak. We have learned already how to bring sanity and health to ravaged people and countries.

The critic who may ridicule all this, should be reminded, that we know practically next to nothing about the working of our brain cells. Brain chemistry and physics, anatomy and surgery, psychiatry and psychology is just only beginning.

One of the first things we have to do, is to study the "signs" (literally) and to find out, what happened and when. Because something has happened in prehistoric times.

You will understand my feelings of incredulous excitement, when I started to examine ancient picture writing, when I read the book of Wilson, and when I came upon the writing of Dr. Chisholm. The reader may recall some of the very first chapters on the system of semantography. In the chapter "Man, the Classifier" (p. 127) I referred to the naming of chemical THINGS and physical ACTIONS, a harmless affair. In the following chapter "Human Evaluation" (p. 128) I came to the conclusion, that the naming of good and evil by Man, the Adjudicator has brought misery upon the world. This unusual thought caused me much worries and consequently I did a lot of stammering in the chapters devoted to those higsounding, but ambiguous and dangerous words, until I came across the words of Dr. Chisholm. The reader has found references to him, also in the chapter "Good and Evil" (p. 539). We shall hear now what he has to say.

The Psychiatry of enduring Peace and social Progress.

This is the title of a brochure, a re-print of two lectures given by Dr. Chisholm in New York, before a distinguished audience. These lectures and the brochure were published by the William Alanson White Psychiatric Foundation, which also sponsored the lectures, and published them first in their journal PSYCHIATRY, Journal of the Biology and the Pathology of Interpersonal Relations, Washington, February 1946)

The underlinings in the following excerpts are done by myself. The reader should understand, that in this place, only fragments can be given, but they will be sufficient at present. As indicated in the ^{brochure}, Dr. Chisholm, was Director-General of Medical Services, Canadian Army, Deputy Minister of Health, President of the National Committee for Mental Hygiene, Canada. "He is a psychiatrist of world-wide distinction", said Ross McClure Chapman, President of the White Psychiatry Foundation.

Dr. Chisholm starts his lecture with paying due respect to the founder,

"William Alanson White's teachings and writings from his OUTLINES in 1907 to the last days of his life provided much of the impetus in the development of psychiatry..."

"He would recognize that there is much for psychiatry to do, and we should be getting on with the job as he would be doing if he were here. He would recognize, as we must, that this is a sick world, with an old chronic, but ever more extensive and serious sickness. The sickness has recently become acutely dangerous and the future is uncertain indeed."

"Man, again, and on a wider and more highly organised scale than ever before, has been indulging in one of his most consistent behaviour pattern, war. Though it seems that, among the people of the world, relatively few want war or enjoy wars, and many suffer in many ways during wars, man persists in this senseless behaviour century after century. Until recent years wars could take place locally without necessarily affecting or causing concern on the part of the peoples in other parts of the world, but that time is past. Every war is now a threat to all the people in the world, either directly or through deprivation of material or loss of trade."

"This situation is widely recognized and no nation will ever again ^{able to} formulate its policies on the basis of isolationism. The interdependence of all the people in this shrunken world is obvious. Fast air transport and the atomic bomb are only the latest steps in that process, which has been going on for a long time, of breaking down the geographical barriers between groups of peoples. We are all now, perforce, citizens of the world, whether we are sufficiently mature adequately to carry that responsibility or not. In the face of this new status as world citizens we must accept the uncomfortable fact that we are the kind of people who fight wars every fifteen or twenty years. We always have, as far back as we know anything of the race, and if we go on being the same kind of people it is to be supposed that we will continue to fight each other."

These words of Dr. Chisholm "as far back as we know anything of the race" is a ^{tentative} indication, that we may ^{other} uncover facts, at present unknown, about the history of the race. The words also indicate that Dr. Chisholm makes the reservation, that at a certain time in the dim history, it might not have been as it is today. He therefore restricts his words to our present-day knowledge of the race.

"Let me repeat", he continues, "we are the kind of people who fight wars every fifteen or twenty years. Why? Shall we only throw up our hands in resignation and reply "human nature"? Surely other expressions of human nature are subject to extensive changes, Why not this one?"

"When we see neurotic patients showing the same reactions in their private affairs we may also throw up our hands and say "human nature", or "Psychopathic personality of this or that type", or we may go to work to try to help the person in trouble to grow up over again more successfully than his parents were able to do."

He visualised the coming wars:

"While the atomic bomb has been a dramatic weapon in the closing phases of the recent war, other possible weapons may be still more terrible. What of the introduction into major water supplies of a chemical which will prevent pregnancy in all females? What of the infinite capacity for killing in the hands of biologists and chemists all over the world? Any country could be paralyzed and destroyed at leisure by a well organized attack of any one of various new types - and without any development of heavy industries. In fact then, the tendency is to involve not only fit young men, but every sign points to the killing in any future wars of large numbers of unselected whole populations, including women and children."

He defines the responsibility:

"The responsibility for charting the necessary changes in human behaviour rests clearly on the sciences working in that field. Psychologists, psychiatrists, sociologists, economists and politicians must face this responsibility. It cannot be avoided."

"We must earnestly consider what can be done to save the race from itself, from its insatiable desire for its own blood. Can this old habitual pattern of the race be eradicated by strong combinations of powerful nations, or by legislation, or by pretending that now everyone will love everyone else and there will be no more wars, or by prayer and fasting, or by control of enemy industries? These all have been tried repeatedly and uniformly unsuccessfully... It is clear that something new is needed - but what?"

He recognizes the neurotic symptoms involved and continues:

"All psychiatrists know where these symptoms come from. The burden of inferiority, guilt and fear we have all carried lies at the root of this failure to mature successfully. Psychotherapy is predominantly, by any of a variety of methods, the reduction of the weight of this load. Therefore the question we must ask ourselves is why the human race is so loaded down with these incubi and what can be done about it..."

What is necessary, is "Maturity" and he depl~~ors~~ the lack of it.

"This fact puts the problem squarely up to psychiatry. The necessity to fight wars, whether as agressor or as a defender who could have, but has not, taken steps to prevent war occurring, is as much a pathological psychiatric symptom as is a phobia or the anti-social behaviour of a criminal who has been dominated by a stern and unreasonable father. They are alike irrational behaviour patterns resulting from unsuccessful development and failure to reach emotional maturity. It is evident that this failure is usual in the whole human race and has been so through historical time."

"For a cause we must seek some consistent thread running through the weave of all civilisations we have known and preventing the development of all or almost all the people to a state of true maturity. What basic psychological distortion can be found in every civilisation of which we know anything?"

The answer (in the words of Abe Fortas, who was present at the lecture) "will undoubtedly startle many people!"

"The only lowest common denominator", continues Dr. Chisholm, of all civilisations and the only psychological force capable of producing these perversions is morality, the concept of right and wrong, the poison long ago described and warned against as "the fruit of the tree of the knowledge of good and evil"

"In the old Hebrew story God warns the first man and woman to have nothing to do with good and evil"

"We have been very slow to rediscover this truth and to recognize the unnecessary and artificially imposed inferiority, guilt and fear, commonly known as sin, under which we have almost all laboured and which produces so much of the social maladjustment and unhappiness in the world. For many generations we have bowed our necks to the yoke of the conviction of sin."

At appears, that those who moralize and tell us, that we ^{are} full of sin and of evil are actually disobeying God's command. In any case, they prevent us ^{from} reach^{ing} this state of maturity, which Chisholm finds so necessary for our survival.

"To produce a generation of mature citizens is the biggest and most necessary job any country could undertake and the reward in saving of misery and suffering would be colossal."

"What the world needs from psychiatry is honest, simple and clear thinking, talking and writing. It needs the same from psychology, sociology, economics, and politics. Clear and honest thinking can almost always be expressed in simple words which are understandable by the people who matter in a democracy. The people who matter are the teachers, the young mothers and fathers, the parent-teacher associations, youth groups, service clubs, schools, colleges, the churches and Sunday schools - everyone who can be reached and given help toward intellectual freedom and honesty for themselves and for the children whose future depends on them. Can we psychiatrists give up our protective device of hiding behind a specific, difficult and variable vocabulary to avoid our responsibilities?"

"Can such a program of re-education or a new kind of education be charted? I would not presume to go so far, except to suggest that psychology and sociology and simple psychopathology, the sciences of living, should be made available to all the people by

being taught to all children in primary and secondary school..."

"Only so, I think, can we help our children to carry the responsibilities as world citizens as we have not been able to do. Only so can we prevent their having to live in a world of fear and chaos and cruelty and death, far more horrible than we can know."

And Dr. Chisholm ends his lecture with the words

"With the other human sciences, psychiatry must now decide what is to be the immediate future of the human race. No one else can. And this is the primary responsibility of psychiatry."

With the other human sciences, this new medium semantography could be an excellent medium to carry out a part of the education of children, as visualized by Dr. Chisholm. The symbols of semantography are taken from the scribbling of children, and these symbols can be playfully taught to children. This would make them aware of the real things and of the words for them, and would prevent them from mixing up words for things. Moreover, they would learn to recognize words which have a very relative meaning or a very ambiguous meaning or no real meaning at all. The teaching of semantography would make the children aware of the harmful emotions roused by such words, and would teach them how to avoid such words, prejudices and all which comes with them. It would teach the children to employ the reasoning of the scientist, to measure and to weigh, to think and to reason, and to grow up as mature citizen.

In the second lecture "The Responsibility of Psychiatrists", Dr. Chisholm outlines the campaign, ^{the} necessary training of hundreds of thousands of "psychiatrists, clinical psychologists, psychiatric social workers, hypnotists, group therapists and general practitioners" as well as a "very extensive overhaul of the educational system".

He recalls that the medical sciences have effectively combatted other diseases.

"Can we use the analogies provided by the methods which have led to more or less adequate control of such other human disabilities as I have previously suggested: tuberculosis, typhoid, diphtheria, small-pox, typhus and others? The problem of neuroses, warped personality, and behaviour disorders is much more widespread and much more serious than has been that of any other diseases, but is there something to be learned from the successes of prevention? The first necessity in effective control of any of these other afflictions has been understanding the cause, the ways that infection spreads, the early signs and symptoms, and the physical, climatic, economic, and social conditions which contribute to propagating the infecting organism. Is enough known of the etiology, (the science of the cause of any disease), methods of spread, early signs and symptoms, and conditions under which the neuroses and behaviour disorder flourish, to warrant a campaign along the lines which have been so effective in these other fields? I think that I have shown in the first of this series of lectures that I believe there is an affirmative answer, and that there are the best of all possible reasons for undertaking just such a campaign."

As you see, Dr. Chisholm points directly to the physical, climatic, and other conditions which cause diseases, and to the science of the cause of diseases, etiology. But etiology goes further in its meaning. It is composed from the Greek word aitia, cause and logos description, and refers to the science of causes in general.

I believe that I have made a contribution to this science and especially to the etiology of mental diseases, by pointing out, that apparently man's brain has been attacked only "recently" by causes of which we know nothing. The fact, that human warfare was absent in prehistoric time, as proved by the documents, and the fact, that human warfare abounds in historic time, as proved by the documents should be enough to start people thinking. Now, I may be allowed with my little knowledge of chemistry and physics to say something about the physical (chemical), climatic and other conditions, of which Dr. Chisholm is very well aware. And we have seen, that he restricts the existence of a mental disease, manifested in human warfare to the present knowledge of the race. In other words: new investigations may lead to new knowledge about the causes of this mental perversion of the human race, and in consequence to measures of a preventive and healing nature. No doubt, education plays an enormous part in the modelling of the minds of the future citizens. And the talks of psychiatrists and psychoanalysts to their patients and to other people are also of great value. But the medical science has found stronger weapons to combat diseases, physical treatment, shock treatment, diathermy, short wave and radium radiation, and the knife of the surgeon. But more than anything else, chemistry has provided the most effective weapons in combatting any disease, and therefore let the chemist have his say too.

Catastrophism in Nature.

As outlined in a previous page, the theory of "catastrophism" is acknowledged by geologists, botanists and biologists. Changes in the crust of the earth, in the flora and fauna, have been brought about by changes in the physical forces. We have learned that paleontologists have invented the term of "explosive evolution" to have a descriptive term for as yet unexplained sudden blossoming forth of a variety of species in flora and fauna. It should however be understood, that these changes do not occur in a split of a second. Some of them may come about over a shorter or longer period of time.

Now, this is a very "natural" theory, and one which should not be difficult to understand by any layman. We have seen ample proofs of the working of nature in our times. We have seen, how volcanic eruptions and earthquakes have wiped out whole cities and devastated whole countries. The causes of these catastrophes were created during a long period, an accumulation of magma, a gradual increase in the strains and stresses of the earthcrust in a certain part, until the actual catastrophe occurred.

We have seen the results of plagues, of floods and famines. We have learned about the sudden changes which, for some unknown reason, make the yearly shoals of fish disappear in some sea and bring the population of that coast on the verge of annihilation. But as said before, catastrophes must not occur suddenly. More than often, the catastrophic change occurs gradually over a long time interval. The encroachment of the jungle, the progress of the desert dunes, the filling-up of some delta, the change of the climate, all these "slow" catastrophes have their profound effect on the plants, animals and humans of the affected region. Prevailing theories explain the glacial periods to have started with a series of very cool summers and prolonged winters, so that the heavy snow in the mountains could not melt and changed into ice. These ice covers begun to move slowly down, until mighty glaciers coming from different mountain valleys were united and then covered inch by inch the vast plains, driving out or extinguishing all life thereon. Climatologists are of the opinion, that a lowering of the average yearly temperature of about 5 Centigrade only in some part of the world, may start a new glacial period. Moreover, for everyone to see, we do live in a glacial period right now. Greenland, was once covered with green, as the name implies. Wheat was grown there, in our times, that is during the last 2000 years, as excavations have proved. Now Greenland is covered with an ice crust about 3000 feet thick and more, a layer which can never melt in the short summers, and which apparently grows.

Everyone, who has been in Switzerland, could have seen the ineradicable proof that those beautiful valleys were once covered with ice. The slopes on both sides of the valley show rocks, polished and rounded by ice, and moreover there are long horizontal scratches on the rocks, parallel and similar to those, which we observe on rocks along which the ice of a moving glacier moves, scratching and polishing its bed.

And we should know what cold and ice means. Take a great philosopher, bring him into the arctic wastes of Siberia, let him work for 10 hours outside in the gruelling cold, or let him not work, but only move around, and then see how every thought in his brain is filled only with one craving for warmth, for the radiation of electro-magnetic waves within the infrared. Then bring him into the hut and before a stove and he will not think of anything, but will only open up all the cells of his body and brain for the reception of those electric waves and for nothing else. Everyone, who has been a prisoner of war, who has experienced great cold knows that no great thoughts can blossom forth under such physical conditions. The most primitive urges of man, getting firewood, finding a shelter and hunting an animal for food and fur, will be the only urges, in modern man, as well as in the man of the ice age.

It is no mere co-incidence that the great cultures, the great philosophies, the great poems, the science of astronomy, of mathematics, and of any other science came about in people who lived in a gentle climate, with the absence of severe winters, and with the short summers, tempered by the breezes from the sea and the cool of the night. We the people of today, have not yet surpassed the miraculous achievements of the Greek culture, and what the generations of Central Europe and Northern America have achieved was made possible - in the first place - by the creation of an artificial climate for a great part of the year.

Historians assert that great empires collapsed through climatic changes. Medical historians believe, that the classic Greek culture broke down when the mosquito came to Greece and brought malaria, which, as we know, saps all energy and destroys the will for achievement, and kills in the end.

So we see, that a small physical item, the temperature, is actually a basic element of any economic and social condition. Every factory manager and department chief knows that a drop in the temperature of the rooms below 12 Centigrade will bring work almost to a standstill, or will result in very little and very poor work. It follows that one of the prime factors for the well being and the progress of a community is to ensure the maintenance of the necessary climate by providing coal, coke, electricity, etc. to prices which everyone can afford.

Now, let us turn to another factor, the air we breathe. Take its content of Carbon dioxide, which is very little (about 0,04%). Now this gas is of greatest importance in the balance of life on earth. We inhale Oxygen, turn it into Carbon dioxide and exhale this gas. So do the animals. But the plants work the other way around. They inhale Carbon dioxide and exhale Oxygen. This process enables plants to build up, and fish, birds, animals and man to live.

Now Carbon dioxide can be used as a fertilizer and scientists attribute the abundant and gigantic growth of ferns and other plants in the Pliocene and Jura period to a greater percentage of Carbon dioxide in the atmosphere. Only 5% Carbon dioxide (instead of the present 0,04%) would change the face of the earth profoundly, may bring forth an "explosive evolution" of new plants and new creatures. Think of the giant creatures, the brontosaurus, dinosaurs, and the others which roamed those gigantic forests in that periods. We stand in incredible amazement before their colossal skeletons in the museum. Then think that these creatures had exceptionally small brains. Is there perhaps a relation of causes possible. Very likely so, but we don't know yet. We are just at the beginning of such researches.

Now take the other ingredient in the air, Oxygen. At present our atmosphere contains a little less than 20% with the remainder made up mostly by Nitrogen. Here we know much more about the changes in human behaviour brought about by a change in the amount of oxygen. A not sufficient amount of Oxygen will result in tiredness of body and limb, but also in a curious working of our brain cells. Some airmen, being unaware of the gradual decrease of oxygen in their lungs, started, for instance, looping the loop, because they thought it was a good thing at the time to do. This is the explanation they gave; they had no other. We don't know how many pilots have been killed by doing foolish things under the lack of oxygen.

On the other hand, the increase of oxygen causes a not less disturbing effect on our brain cells. There is an exhilarating feeling, a profound lightness and headiness, even drunkenness, with all the known results.

Nitrogen and Oxygen are only mixed in the air we breathe. However, under special physical circumstances, as for instance great electrical discharges in the atmosphere, these two gases combine. One of these combinations is N_2O , commonly known as laughing gas. It has been extensively used by dentists to cause an exhilarating drunkenness in the patient and to make him insensible to pain. During the last century, the people of the day arranged laughing gas parties. A terrific gaiety with all its noisy circumstances was the result. Today, we use another chemical, commonly called alcohol to cause a similar party gaiety. And alcohol can break down all mental barriers, can make a killer from a gentle person.

We cannot deny the possibility that in bygone ages or only milleniums, the content of oxygen, nitrogen, carbon dioxide and other compound gases has been different in the atmosphere. A change of a few percent only, would have changed life profoundly, and moreover might have drastically changed and affected the brain tissues and all mental activities.

We have all reason to assume that such changes have taken place, and scientists are positive about this. The eruption of the volcano Krakatau in 1880 in the South Pacific has whirled up gases and dust in enormous quantities, and some of the dust has been found circling the earth in the upper layers of the atmosphere, even 30 years after the eruption. The geologists tell us that volcanic activities have been very strong at certain periods and it is not difficult to realise that great amounts of erupted gases have changed the chemical, climatical and biological - and last, but not least - "mental" conditions in parts of the world.

Even in our times, we observe marked changes in the mental activities of people living in the rarified atmosphere in high altitudes, against those living in the humidity of the jungle. Why do Indian philosophers go up the high mountains for thought and meditation. Why do they claim a profound lifting of the human mind in mental spheres beyond our reach, and why have they attained miraculous powers of the mind over the body?

Radioactive Radiation

But all the reflections put forward in the foregoing pages are based only on our conservative and very limited knowledge in chemistry. What do we know of the influence of radioactivity on living cells and especially on brain cells? What do we know of the existence of "brain waves"? What do we know about the amount of radioactive radiation, which we receive from the sun and the depth of the universe, or for that, from ^{Uranium bearing} geological rock formations? We know that great catastrophic outbursts on the sun surface (photographed many times) create terrific magnetic storms on our planet, throw our magnets out of order, cut out our radio communications, and disturb profoundly our atmospheric and electrical equilibrium with the result of thunderstorms and other meteorological disturbances. But what do they do to brain tissues? There are millions of people, who can predict a coming thunderstorm by the virtual headache they get. This is ample proof of the influence of something, call it radioactivity, electromagnetic waves or brain waves, or anything to which we have given a name, but of which we know nothing.

And what does an excess of light, or let us say electromagnetic waves between 4000 and 8000 Angstroms, do to our brain? During the last 30 years, a new sun worship has developed in connection with mixed bathing. Now girls and boys and grown-up people lay for hours in the glaring sun, until they are baked a crisp brown. And if there is no sun, they have installed electrical apparatuses in their homes and their bathing establishments, which gives them a similar tan by showering them with the highly active (chemical) ultraviolet rays. We know that these rays are dangerous to our eyes, but perhaps they are also dangerous to our brain tissue. In any case, this is the question which one of the famous biologists and Nobel prize winners, Alexis Carell asks in his book "Man, the Unknown". And this whole book has been written by him to show that we know practically next to nothing about Man, ourselves. For instance, he refers to a new type among the youth of America, the athlete, who by special training and special food develops a giant physique, powerful muscles, broad shoulders, but at the same time is left with a small birdlike cranium.

Food for Thought

And this brings us to another host of problems. What is the influence of certain foods on our brain tissue? Some people believe that fish meat, which contains phosphorous compounds (found also in the brain tissue) is favourable to the development of intelligence. Perhaps it is, perhaps it is not. We just don't know. Some people believe that the eating of meat makes man ferocious. "But", says Professor Walter Murdoch, "Do we not mix up cause and effect? It may just as well be, that ferocious men prefer meat as food".

All this tends to show that we know next to nothing about the primary factors which make a man gentle or ferocious, peace loving or bloodthirsty. Only during the last years have mass experiments been carried out on children in Great Britain and the United States to find out some relation between the development of the mental faculties and nourishment. This is only a start, but a start it is.

Human Madness

Only a century ago, lunatics were considered as being possessed by the devil. This in turn brought the therapeutics of "driving out the devil" by incantations and beatings. Today we are a step forward. We have realised that lunatics are sick persons. We have realised that there is something, which Freud called the "Unconscious", and we are just beginning to explore.

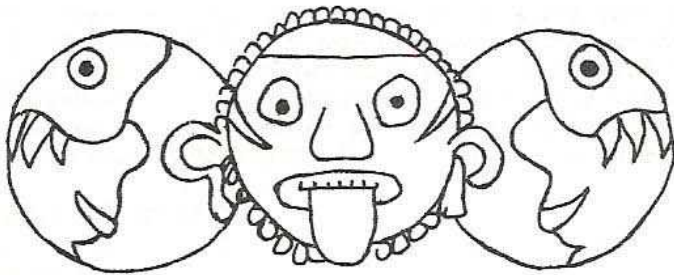
We do not need to assume outer influences to understand that "mind" is something which has its own laws, its own physics and its own chemistry. We know that many brilliant minds, geniuses, were attacked by sickness and madness. The very same brain tissue, which gave the world unforgettable poems, symphonies, and brilliant theories changed to the worse. Prodiges have astounded the world by the brilliance of their mind in their teens. But the same mind gave way before the body reached maturity.

There are innumerable happenings on record of whole communities of sober men and women, being befallen by some sort of frenzy and madness, flogging themselves and inflicting injury and death to themselves and to others. Innumerable articles have been written by psychiatrists and psychologists about mass psychosis. We have been witness of how a great and sober nation, the Germans, went mad, run amok, destroyed books, proclaimed mad theories, killed off millions... German paranoia, as some psychiatrists called it.

Mass Madness in historic Times.

Some years ago, I came across a book, written by a psychiatrist and full with pictures. These were drawings of lunatics and they looked like such. The author examined these pictures and showed, that their objects could be studied as a clue to the hidden and suppressed desires and complexities in the subconscious. This study can be used in much the same way like the method of the psycho-analyst to diagnose and to cure the lunatic. Unfortunately, much as I searched, I could not get hold of this book here in Australia, and therefore I cannot give samples of those lunatic pictures "or call it "picture writing" (readable by the psychiatrist) from that book. However, I hope to get hold of it, before this manuscript goes into print.

There was one chapter in that book, which has now become of the greatest interest to my study. The author of that book compared the pictures of modern lunatics with the pictures of the Aztekes, the people, who lived in Mexico at the time when Cortes arrived in 1519. This people developed a great culture during the 14th to the 16th century, but the author of the aforementioned book says, that they were to some extent mad. And he proved his assertion by comparing drawings of the Aztekes and drawings of lunatics.



Drawings of Lunatics
compared with
Drawings of Aztekes

to be supplied later
when the book is located

Aztek Drawing of "Sun Gods"
from "Old Civilizations of the New World" by
A. Hyatt Verrill, New Home Library, New York

Drawings from a book by a
psychiatrist, discussing drawings
of lunatics compared with Aztek dra-
wings.

We know from many contemporary reports that the religion of the Aztekes was cruel and bloodthirsty to the extreme. According to Webster (28) "their civilisation was marred by hideous human sacrifice, maintained on a scale probably never equalled elsewhere". According to A. Hyatt Verrill, author of "Old Civilizations of the New World" (see above) countless human victims were offered to the Gods and sacrificed on the altar. In full view of the whole people, the highpriests cut out the beating heart from the living victim, be it a man, a woman, or a child. This gruesome operation, performed in full consciousness of the victim and in full sight of the worshippers, whipped them up to a mad frenzy.

The victims were usually prisoners of war or captives taken from another tribe. The demand for human sacrifices was so great that the strangest customs developed. To secure enough victims, the warriors of the Aztekes and the Tlascalans met once a year to a prearranged battle, in which however, no one was killed. Instead, the warring parties tried to drag and carry off the opponents, which subsequently were sacrificed on the altars of the Aztekes or on the altars of the Tlascalans, respectively.

Do we need to be convinced by the reasoning and proofs of the psychiatrist that those people were mad? The above story alone should convince us.

We admire the achievements of the Aztekes, as far as architecture, stonework, gem-cutting, carving, etc. etc. are concerned. On the other hand, we must shudder in horror about their inhuman, senseless, bloody sacrifices, and - even without the psychiatrist - we may come to the conclusion, that those people, clever and industrious as they have been to some extent - have been mad to some other extent. And this madness, the psychiatrist can still diagnose from their "picture writing". And we can easily draw analogies and conclusions with regard to our times.

Mass Madness in our Times

The nations of the 20th century excell in scientific and technological progress. On the other hand, we are undoubtedly mad - to some extent - because we indulge in inhuman senseless blood sacrifices on a scale, which makes the hideous sacrifices of the Aztekes look like child's play. Never in the history of man and of life on earth have such things happened, what has happened (and is still happening) in our time. And there is more to come.

There are the Germans, a people of about 80 million, clever, industrious, sentimental at times, open to reasoning, and until recently among the first nations with regard to progress in all fields.

But they went mad, just like the Aztekes of 500 years ago. And their highpriests told the people of the sacrifices to be made, human sacrifices to be sure. The members of the German race must sacrifice their lives on the altar of the Nation, and of course, the other, inferior races must be sacrificed, literally, for the good of the German nation. And the word BLOOD was deliberately used to whip up the whole nation into a frenzy. A death cult was established, unsurpassed in history. The young boys and girls were told songs, which glorified the greatest honour for a German youth: to die. And sure enough, every boy of the Hitler youth received a dagger with the inscription BLOOD AND HONOUR (see p. 459) And they used the dagger in the Ukraine, in Poland, in France and everywhere else in Europe.

But this was slow work. And so the Germans will go down into history as the ingenious constructors of mobile and permanent gas chambers, in which they killed off millions of Poles, Russians, Jews, and other inferior races. Do we need a psychiatrist to tell us, that the Germans were - to some extent - mad.

And this madness is still with them. Many reports from Germany say, that German men and women are not in the least sorry, for what has been done. On the contrary, not enough Jews and other people have been killed, and they think to make a better job next time. A Jew still living in their midst, who somehow escaped death, is now called "Gaskammer-deserteur" (gas chamber deserter). A man speaking and acting this way would be confined to a padded cell. He is mad, no matter how skilled he may be in making technical gadgets.

Sure enough this mass madness has not attacked all the brains in Germany, just as it has not attacked all the people outside Germany. But there is ample proof, that this madness is world-wide.

Take the Japanese. They are a very industrious people with an intense feeling for art and beauty. But here again their highpriests have told them that they must sacrifice their lives on the altar of the nation. And they did sacrifice their lives. Their suicide pilots were called Kamikaze, heavenly wind. It was a religious act, and mad.

Think of the Italian fascists, who tortured and killed, not people of foreign and "inferior" races, but their own countrymen. They too were befallen by a kind of mad frenzy.

Take the Ku-Klux Klan of America, their hoods and their fiery cross. Are their brains not perverted, are they not mad to some extent, no matter how good businessmen they are in their office hours?

Take the French, the epigones of the French revolution for freedom and liberty, the nation which gave us the Rights of Man, the people, whose anthem is still the song of liberty all over the world. When the Spanish civil war ended, thanks to German and Italian planes and bombs, a few thousands of Spaniards and not killed members of the International Brigades, escaped over the Pyrenaeas into the land of traditional political freedom. Instead of letting them go, wherever they want, to Mexico, South America, Africa, anywhere, those poor humans, who have lost everything, including their wife, children and their hopes, were incarcerated in hideous concentration camps, under horrible conditions, where they died a slow death. And they were not criminals, not French defaulters, not savages, but democrats who fought for all that, for which France stood with all her traditions. Is there any sense in this? Have the brains of the French ministers, French generals, judges, and police presidents, who are responsible for this mass crime, this senseless mass sacrifice, not been attacked by the same madness which pervades the world.

Well, you may say, all this is past, and let us hope, it will not happen again. But it does happen, right now, when I write this, and it happens on an even greater scale. And to be sure, it has all the appearance of a religious sacrifice. Millions of people are tortured, deported, killed quick or slow, and all sacrificed for a belief, in which people all over the world believe fervently and are ready to die for it. But the highpriests and the caste around them, prefer to kill off those, who do not believe fervently enough, or believe just a little different from the official belief.

We all, who believed that Socialism will bring a better world, we all who have hailed the emergence of Socialism in Russia as the beginning of a new and better era in the history of mankind, we all, for whom Socialism was the expression of a new religion, a new expression of the high destiny of man, we all have been terribly disappointed. More than thirty years, since the new rulers have come to power, have passed and today we witness a great country, in which the poverty of the masses has reached new levels of depth. And a new class of bureaucrats has established a blood terror of an unprecedented scale. Millions of people are carried off in the dead of the night and sacrificed in the was-

tes of Siberia to die a slow or quick death. Why? The reasons are manifold, but mostly because they are "not reliable", because they uttered a blasphemous word against the highpriests or their rule or their theoretical religion. According to many reports, there is not one family in Russia, who has not a relative or friend, who is "absent" and of whom they know that he might still live in agony, but he will never return. You, dear reader, who may live in a country, where the freedom of the individual is still respected, just think, that your wife, or your son, or your father, or your brother, or your friend is carried off, never to return. Imagine the mental agony, in which you and your family will live, and realize that if such things can happen in our enlightened age, surely the perpetrators of this greatest of all mass crimes must be mad to some extent.

The Russians do not deny the existence of forced labour camps. They argue only about the figure, which according to escapees is estimated to 18 millions. With an average death roll of 30% per annum, that means that 6 millions of humans are carried off each year into the camps, and 6 millions of corpses are carried out of the camp each year. But even if the figure would only be 3 millions, or 2 or only 1 million, the madness would be the same.

One should believe that a new generation in Russia has grown up with socialism in their bones, and now, the old aristocrates, the middle classes, the officers, the kulaks - and the old bolsheviks who had a different idea of socialism - all dead and thoroughly liquidated, one should believe, that such mad measures, such mass killings, such sacrifices should not be necessary any more. The regime is firmly established - or is it?

Russia is the only country in the world where decrees exist, which establish the blood guilt of the whole clan, the family. If one member of the family defaults from the true religion, the whole family may be deported and held responsible. Krylenko, the then People' Commissar for Justice commented on these terror-decrees (Izvestia, No. 37, Feb, 12, 1936):

"In the opinion of liberals and of opportunists of all kinds... the stronger a country is, the more lenient it can be towards its opponents. No, and again No! The stronger the country is, the mightier it is, the stronger the ties which unite Party and Government with the toiling masses... and the greater our indignation and revolt against those who disturb our Socialist construction and the more justified are we in taking stern measures against them..."

Imagine an individual, a father, acting this way against his own family and people, ready to sacrifice them for his perverted conviction - is there a better case for a psychiatrist and a padded cell?

And this religious madness is overflowing the boundaries. Altars for human sacrifice are erected in Hungary, in Poland, in Rumania, in Czechoslovakia and elsewhere, and more and more people are affected by it. Every true communist believer in Western countries is fervently convinced that all these human sacrifices are good, necessary, justified... aren't they mad too? The Soviet myth is the new opium for the people, as Koestler remarked.

And now, take an American Ku-Klux Klan man, or a French chauvinist, or a German Nazi or a Communist, put him in a chair and try to reason with him... or put him on a sofa of a psycho-analyst and try to treat him with the subtle influence of words... will it lead to any result? Their brain matter is seriously affected - and we don't know yet what cells are attacked, and how the disease can be checked.

And now consider that this generation has brought about two world wars within 25 years, and the third already in the making. Were all the foregoing paragraphs really necessary to convince you, that the present generation of human beings is mad, even more mad than the Aztekes. We indulge in human sacrifice on a scale unheard^{of} in the whole history of mankind.

Modern "Picture Writing on the Wall"

This book is about a modern picture writing for the improvement of human understanding. In the course of this appended chapter I have told about the oldest picture writing of man, the pictures of prehistoric man, drawn on his caves about 50,000 years ago. Naturally, this was not a "picture writing" in a modern sense, with the formation of words and sentences. Those were only pictures, but as such they told their story, nevertheless, and more convincingly than hundreds of words could ever do. At a glance at a caveman picture of an animal hunt, we can read the whole story in very vivid lines.

The artists and the world at large have admired the great art of the Cro-Magnon and Aurignacian caveman, who with a few lines could draw an animal, so vivid, so forceful, so "true to nature". Then the new cave of Lascaux, discovered in 1940 was explored, a peasant

went in with the explorers. Confronted with the forceful pictures on the walls, he exclaimed in admiration: "Ah, this bull would easily fetch 100,000 francs on today's market!" Is there a better proof of the naturalness and great art of those prehistoric people? That peasant would surely not have got excited by a decrepit drawing.

Now, the archeologists have many methods to determine the age of a find, and the period in human history. There are the marks of the glaciers, the sediments, the alternating layers of pollen and dead leaves on the bottom and throughout a filled-up lake, there are the differences in the artefacts, the flint chips, the weapons, the pottery, unglazed or glazed, and last but not least the art displayed on such pottery and elsewhere. And an established method of archeology is the determination of ascendance or decadence of art in the various periods of man's history. For him, the art displayed by the Aurignacian man is high art indeed, and he has no difficulty to follow the decadence in later periods, and a new ascendancy. In other words, archeologists have already done - to some extent - what I recommend in this chapter, as an extension of picture interpretation.

We common people have been unfortunate enough insofar, that we have not been taught art and the history of art in school. Consequently we cannot grasp the excitement, the rapture of an art student, who follows art through the ages, who stands before the strange sculptures of Babylon, the many pictures of Egyptian people, flat and lifeless in their curious front and profile posture, and wonders about the almost idiotic smile of Archaic Greece, and then - is suddenly confronted with a statue by Phydias or Praxiteles.

We common people, who shuffle through the art museums, with the chief impression that our feet hurt, we have not been told what the emergence of Greek sculpture really means in the evolution of man, or for that, in the evolution of life on earth. Here, for the first time, since the molten ball of our planet cooled down, some two billion years ago, here the world-mind emerged in sculptures of breath-taking naturalness and beauty, not yet surpassed throughout the following 2500 years down to our time. And when we interpret this great art in the way recommended in this chapter, and ask ourselves: the people of those classical times in Greece, were they mad or were they full of reason? - the answer is given in the overwhelming achievements of this people not only in art, but also in architecture, in poetry, in drama, in philosophy, mathematics, geometry, medicine and science in general, in politics, as well as in the peaceful human contest in the arena, where not only athletes, but also poets strove for the laurels. For those great achievements which withered with the time, their music, we know the story of Orpheus, who enchanted the creatures, and for their paintings, we know the story of the sparrows, which came to pick the cherries, so naturally painted on the canvas. And we have not even mentioned their achievements in linguistics, in logic, in rhetoric, economics, law and technology. Just as the later architects have not yet been able to surpass the serenity and simplicity of a Doric temple, so have all the tailors and fashion makers not been able to design a man's and woman's garment, more simple and more graceful than the Greek toga.

Yes, we may borrow from the paleontologists the term of "explosive evolution" for that incredible outburst of the world-mind, some 2500 years ago, on that little peninsula in the Mediterranean. And we should have no difficulty to relate the high art of their pictures to the high state of their reason. And this holds true also for the re-birth of Greek culture, the re-birth of Greek culture, the Renaissance.

I have told you about that book of a psychiatrist, who compared the drawings of lunatics with the drawings of the Aztekes and concluded that they must have been mad, and this psychiatrist points directly to their senseless human sacrifices to prove his point. As said before, this madness happened only a few hundred years ago.

I have furthermore recounted the incredible and senseless human sacrifices committed in our times and even right now - and now, I should prove the madness of the modern generation by the same method - their pictures.

"We are the horrible examples", said the psychiatrist Dr. Chisholm, "we are the people who fight wars every fifteen or twenty years." And we shall go down into history, not only as the makers of two world wars, not only as the inventors of concentration camps, not only as the designers of mobile and permanent gas chambers, not only as the mass killers of millions of men, women and children, not only as the people, who have been able to pervert the loftiest ideas of mankind in the direct contrary - we shall go down into history as the makers of a new kind of art, much extolled by art critics, much in demand by modern art galleries - but a kind of art, before which future generations will stand in amazement, and - without being psychiatrists, without having studied the art of lunatics - future generations will say: "Look at these pictures from the 20th century. Those people were mad. Those were the dark ages. Remember their wars and their mass killings."

That is, future generation will only be able to say this - if we can check this madness of self-extirpation; otherwise this brain disease will lead to our extinction.

Now, it is comparatively easy to speculate and write about the state of mind some thousands of years back. The average reader, himself not a specialist in history and related sciences, cannot check or contradict the writer. However, when the author comes to problems of our times, the matter is different, and many things which I have said in foregoing pages will arouse the wrath of many politically minded readers, who know it better. And now I am going to offend and to annoy the art minded reader, and this means most intellectuals, who take an interest in anything produced by man.

So let me tell you right in the beginning, that I myself am such an intellectual; that I myself have had modest successes as an amateur in art and music; and that I myself have hung on the lips of the apostles and highpriests of art of olden times and of modern times. I did my best to understand art, and the writings about art. I have visited the greatest and most famous art galleries of Europe (with the exception of Spain). When on my travels, I could stop for 4 hours in a town, I spent more than 3 hours in the art galleries and before the great architectural monuments. I travelled hundreds of miles for the sole purpose: to see one single building. In short: I did my best to understand this highest creative force of man.

Moreover, modern art is not something which I have witnessed as an old man, hardened in the traditions of the past. I have grown up with it, and as a youthful man, I was ready to discard the worn-out ideas, and to storm the bastille of tradition. Believe me - I strove hard, very hard to grasp, understand and feel the beauty in those strange drawings and paintings, which now fill the modern art galleries and art magazines.

Today, after studying the art of all times, down to paleolithic man, after studying the art of the Aztekes and the art of lunatics, I can't help drawing the conclusion that we are now at the bottom of a cycle wave, that we have reached a low, for which the word "decadence" is not enough. It is madness outright. Not only the psychiatrists are telling this, even the moderns themselves tell us that their art is in direct relation to mental disturbances.

Art of the 20th Century

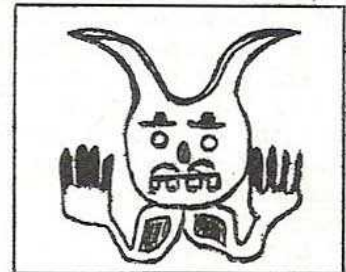
(from CONTEMPORARY ART
Crown Publ. New York)



PABLO PICASSO Lady



SALVADOR DALI
Soft Self Portrait



JOHN WALLACE Figure

Now, in order to follow our enquiry we must draw a line between these artists. We must divide them into the believers and the cynics, who don't believe. And these cynics, we must again divide in those who must make money, and those who have money enough and can therefore afford to be only cynical. Needless to say, that our divisions will not be sharp cut.

If the art dealer, who handles Salvador Dali's pictures would tell him:

"My dear, big money could only be made nowadays in paintings in the style of the cinquento. If you agree, I shall place with you right now an order for 5 pictures, 20,000 Dollars each. Go ahead!" - Mr. Dali will paint pictures in this style. But in a mad world, only the crazy things are noticed and moreover, idiots with big accounts will spend sums on them, simply because people will notice that they could afford to spend fortunes for a few squarefeet of canvas, covered with idiotic scrawlings. It's madness all right.

Then there are the painters who do not say outrightly that their chief interest is only "they" and the money they make. Take Picasso. He is a great artist. Why then does he indulge in idiotic stuff, which can be made better by any lunatic or any scrawling child?

I personally am of the opinion, that Picasso does this, what Shaw does in the literary field. They amuse themselves by hitting at the petty-bourgeois with mischiefmaking incongruities and contradictions, which the bewildered would-be intellectual takes as deep thought and high art. Most artists are full with utter contempt for the philistines, on whose money they must depend for a livelihood, and their revenge is a devilish delight in proving again and again that the people of our time will swallow almost anything, and even pay for it, pay even more the more idiotic it appears.

I would not be surprised, if - after Picasso's death - his diary would reveal, that he was out to fool the whole world. And how he has succeeded in doing this.

Usually these artists are very good at language and they command a vast array of highly abstract and even meaningless words. They will cynically supply to each picture an explanation and a world philosophy, rolled in one, and free of charge. Sometimes, some art critics will supply it for them. As for those, who earnestly believe in their "stuff", they are material for the psychiatrists. Many however, have fallen prey to the words of the successful "moderns" which they simply try to copy or outdo.

Why then, have so many intellectuals, who are reasonable, and full of what we call "common sense", fall prey to this kind of art? The answer is difficult. There are many factors, one is the mental aspect, the individual and the mass psychosis. Another aspect is the power of words.

In this book on semantics, we have learned to analyse many high-sounding words, much in vogue today. One such word is "progressive". It has a magic of its own, and politicians from right to left, need only found a "Progressive Housewives Association" and hundreds of thousands of men and women will fall for the word. Today, every intellectual or would-be intellectual, and even the common man in the street, wants to be "progressive", and the worst words with which you can annoy a person is to state that he or she is "not progressive", "reactionary", "old-fashioned" and some other words.

If the art critics and the artists, in short the "men who know", decree, that this "new" art is "progressive", every intellectual, wary of his reputation, will agree, and will try to understand the "progressiveness" in this new and modern art. Moreover, he will, at any party or gathering, show, how apt he is in understanding "progressive art".

If ever there was a real counterpart for the "Emperor's clothes" story, here is one. "Don't you see," cry these people, "how wonderful they are?" We need the unperverted mind of a child to tell us, that the Emperor has nothing on.

Stuart Chase said, that a future generation, trained in semantics, will receive the speech of a Hitler with roars of laughter. Surely, a future generation will act likewise before the saying, painting and acting of those clowns in art.

But their pictures are too much in the lunatic field. We cannot explain them only by semantics. Moreover, archeologists and historians, agree that there are undoubtedly cycles to be observed in human history, ascendance and decadence of art and reason.

And so, future generations, will surely stand in amazement before the modern art of the 20th century. They will remember the dark ages after the fall of Greek culture, the burning of witches and heretics and the decadence. It was a mild outbreak. The distortions in anatomy and naturalness in the pictures of that age are mild only. The number of witches and heretics burned was small. The mass killing of the Albigensers amounted only to the destruction of the people of one village of today, be it Guernica, or Lidice, or one of the many thousands of villages in Europe.

"Those were the dark ages. The people of the 20th century were mad."

Let us hope that in the coming wars of destruction, something will remain, to show future generations, that not all the people's mind was attacked by that madness.

Visionaries

On many occasions in this book, I have pointed to the fact, that poets and great thinkers have apparently the most receptive minds, most sensitive to the manifestations of the "world-mind", who pervades the universe. Consequently, poets have visualized in flashes of intuition, much which has later been verified by experimental science. Now, with the existence of "extra-sensory perception", even of pre-cognition established to some extent by experimental science, we can give more attention to those visionaries.

I shall deal here not with prophets and mystics, but with two visionaries, who have been able - by simple and very imaginative language - to catch the interest of boys and adults. The one, visionary of my youth, is Jules Verne, the other is H.G. Wells.

I have tried to find books of Jules Verne in modern ^{lending} libraries. They are non-existent. Not because they have been removed. On the contrary. They have been read to shreds. And a re-print is very unlikely - simply because most of Jules Verne's visions have come true. Today, boys and adults need newer stuff, and so we see in the pink pages of the Sunday supplements atom scientists rescuing chorus girls in space rockets against which the space rocket of Jules Verne is nothing - simply ^{because} rockets in the shape as visualized by Verne are already soaring into the heaven of White Sands, New Mexico, rocket testing ground. A rocket which will escape the earth's gravitation, will perhaps reach the moon, is today, a matter of a few decades or years only.

Other visions of Jules Verne have meanwhile become commonplace tools, as for instance his scaphander, the diving suit which carries compressed air, the submarine, and many others. There is one novel, which exerted a great influence on my boy mind, and still exerts, simply because the realization of this idea is still a far way off.

Jules Verne visualized a correction of the declination of the earth axis. At present, the axis of the earth is declined against the ecliptic, the geometrical plane in which the earth circles around the sun. If we could swing the earth axis to stand vertical against the ecliptic, a great beneficial change would take place. The ice caps on the arctic and antarctic would melt completely. Greenland would again become "green land". The great antarctic continent, the immense wastes of Siberia, the whole of northeast Canada, would become inhabitable. Although the regions around the equator would still remain the torrid zone, all other parts of the world would enjoy an equitable climate without much change throughout the whole year. What is possible now in a few parts of the world, would then be possible in great regions: 3 crops a year.

Verne could think of nothing better, than the recoil of a gigantic gun, with a barrel of 2 miles, bored into the Kilimandjaro. As this terrible recoil would shock the whole earth, and would destroy all buildings and land, over which the sea would swamp, Verne let the experiment end in failure. On the 23rd September, the autumn equinox, when the shot should be fired - nothing happened, except a minor earthquake around the Kilimandjaro. The sun rises not vertical, but as usual. Why? Because the scientist's calculations - although correct, were marred. Three 000 were blotted out by accident on his blackboard. The calculated gun, projectile, explosive charge, etc. was just only 1/1000 of the power needed.

But today, we are much nearer to the realization of this idea. We have now developed jet and rocket propulsion, in which the force grows gradually, without sudden recoil. Moreover, we are near the attainment of atomic energy of great force. And so, I personally am of the opinion, that a shifting of the earth axis, very slow, perhaps during an interval of say 100 years, by jets placed at calculated points will be considered a practical proposition, and may well be put into effect in times to come.

The other visionary is H.G. Wells, much better known to the readers of today. We may remember that Wells wrote a novel in 1904, at a time, when the brothers Wright made their first ridiculous hops (or was it before). This novel described the horrors of modern aerial warfare, in such concise words, that LIFE brought pictures of the war of 1944 with captions from Well's novel of 1904.

And Wells, who wrote also a world history, so that the common man may understand the happenings of the day, and he ^{Moscow} faced also the possibility that homo sapiens will extinct himself on this planet.

In one of his phantastic novels, Wells let the earth go through the tail of a comet. The effect was very curious. In the minds of men (and women) all thoughts of hate disappeared; people stopped doing evil things to other people. Husband and wife stopped quarrel^{ing} with each other. All mankind united in fraternal love... War disappeared.

Now, astronomers think that the earth went many times through the tail of a comet, and although the density of this tail is extremely small it consists of radioactive emanation, brought into fluorescence by the sun's electro-magnetic radiation.

And radioactive radiation has a marked influence on living tissue. We know that small quantities have a highly beneficial effect, health can be restored, tissue repaired. But in bigger quantities this radiation destroys the healthy tissue. Think of the many radiologists and X-ray specialists, who lost limb for limb in their heroic profession and died a slow death.

But what does radioactive emanation do to brain tissue? This is the great question. We shall soon see, that - if we assume an effect on our mental activities - it becomes the greatest question with regard to the future of mankind, the abolition of war, etc.

You may know the exhilarating effect on the brain (soul) when ascending a mountain. The exertion may be great, but a wonderful peace of mind begins to permeate our whole body. Why? Is it the difference in the atmosphere, or the difference in radioactive radiation. ^{It is different from a walk in the plain.} A few decades ago, we didn't know anything about the so-called ultra waves. Their frequency exceeds the frequency of any known electro-magnetic radiation. Their penetrating power is terrific. Even in deep mines, they have been found.

But what do they do to brain tissue?

And what other radiations pervade the universe, of which we do not know yet?

And what recurring cycles exist in these radiations, similar to the short 11 year cycle of sun-spot activities, which influence all life on earth?

THE PHANTASTIC HYPOTHESIS

A short Summary for the hasty reader, who starts reading at the end,
and a Recapitulation and Conclusion, with a few new interesting points,
for the faithful reader, who followed me through all the foregoing pages.

Now, having discussed point for point all the aspects and facts of the problem, the phantastic hypothesis seems not so phantastic at all (at least to me and I hope also to you, dear reader) It may provide a basis for a working theory on the most burning problem of mankind: to save homo sapiens, who drifts towards self-extinction.

It may well be, that this hypothesis, when made known to the people, and supported by all the facts - which everyone can see for himself - it may well be, that it ^{may} shake our little world to its foundations; it may cause a tremendous stir in the minds of all men and women; it may cause the rise of a hope in all the hearts, so incredible and so jubilant, that life and future may take on a new meaning, a new joy and a new purpose. Stated in simple words

THE HYPOTHESIS MAINTAINS THAT HUMAN STRIFE AND WARFARE AGAINST EACH OTHER HAS ALL THE ASPECTS OF AN EPIDEMIC BRAIN DISEASE; THAT THIS EPIDEMIC IS OF A TEMPORARY NATURE, HAVING STARTED PROBABLY 20,000 YEARS AGO; THAT IT WAS ABSENT 50,000 YEARS AGO AND PROBABLY THROUGHOUT THE MILLIONS OF YEARS BEFORE, AND THAT SCIENCE CAN COMBAT IT, AND BRING IT TO AN END IN MUCH THE SAME WAY AS OTHER EPIDEMICS HAVE BEEN BROUGHT TO AN END.

The evidence - for everyone to see - is provided by the undeniable fact, that there exists, what we may call, an "iron moral law of nature", namely, that in the whole world of living beings, there does not exist war between members of the same species (wolves don't hunt and kill wolves; lions not lions, tigers not tigers) with the exception of the species homo only, who hunts and kills his fellow man.

And the further evidence, that the documents of paleolithic man, the oldest "picture writing" of man, show cunning animal hunts, but not one of the many thousands of pictures found, depicts a fight between human beings - whereas after neolithic man, the walls are simply overflowing with pictures and writings about victories and wars of human beings against each other.

And the further evidence, found by archeologists and historians, of the direct relationship between the "picture writings on the walls" and the outbursts of reason or madness throughout the periods of human history (ascendence and decadence of art)

And this hypothesis does not confine itself to human warfare only, to the shooting of arrows or bullets, but to human strife in general. The ever widening gulf between the single members of the race, between the husbands and wives, fathers and sons, nations and nations, seems to be directly influenced by the prevailing brain perversion. If the scientists start working on this hypothesis, start finding out what influences brain tissue, and what can be done to counteract destructive influences - then we may well face the incredible aspect: a future of peace in the minds of man.

And I have shown, that some scientists are already far advanced on this road, and that what we need, is a co-ordination of efforts, based on a common working theory.

In the following summary, I shall not repeat statements of those scientists and others whose theories lead in the same direction. And I shall try to use the same language, somehow between the popular and scientific presentation, to sum up this enquiry.

A R O U N D - U P

with some new and interesting points.

Re-examination of Darwin's Theory of Evolution

Modern scientists are now convinced that man did not descend from the ape. Both had probably the same ancestors. This branching-off occurred during the tertiary, probably by the accumulation of exceptionally favourable circumstances, climatological, physical, and other, not yet known circumstances.

Whereas foregoing theories maintained that nature evolved in continuity, modern science maintains now, that nature acts in jumps. Descriptive terms in geology and paleontology are for instance "explosive evolution" and "catastrophism" (beneficial and otherwise).

The Emergence of Man, of Language and of Reason.

In the tertiary, favoured by exceptional chemical, physical and other circumstances, the animal, which was destined to become Man, broke through a "barrier". The mind of man emerged into a new world, with new physical laws, the world of mind. Now, man could behold all the things in space and time and could differentiate between them and their succession in space and time. With the emergence of reason, man needed symbols for this differentiation, and the inarticulate cries changed to articulate language.

The Organisation of the Universe.

Modern science maintains that the universe is organised on different levels, each with its own and different physical laws. The subatomic world of electrons, protons, neutrons and other manifestations is probably the first level. In this world, the physical laws of our world of perception do not operate; they are different.

In our world of great aggregates of atoms, we distinguish between the level of inanimate matter, the anorganic world with its own laws, and the level of animate matter, the organic world of living beings. Their laws of reproduction and multiplication are totally different from the physical laws operating in the world of dead matter.

The next level is the world of mind, in which we may distinguish three intermediary steps, commonly called emotion, reason and conscience.

There is probably a further level in the world of mind, only attainable by poets and mystics. Here new and different phenomena are set in motion.

Very likely there are even higher levels, of which our philosophy can only dream. But now, we human beings, trustees of any further evolutionary progress to be made, can by the same evolutionary process - the evolution of reason - help ourselves forward on this path to higher levels of organisation and sublime order. Thus we can fulfil our destiny set by purposive force in the universe, which we cannot comprehend yet, no matter what names we have given to it.

How the jumps from one level to the next higher level occurs, we do not know yet. But we know, that the different levels are interdependent. The subatomic particles, which form the atoms and molecules, which in turn form the cells, which in turn form the living organisms, which in turn emerge to brain matter, which in turn form thoughts, depend directly on each other. Brain tissue belonging to the greatest philosopher, when exposed to sulphuric acid, or cyan gas, or the lack of oxygen, or extensive radioactive radiation will be destroyed; all thoughts will come to an end. On the other hand, chemical and physical circumstances of a favourable nature may induce the brain to the attainment of new heights, where sublime order and peace reigns.

The World of Mind

This world conforms to new laws, which we begin to explore in our times. In the world of anorganic matter, where the ordinary laws of physics prevail, the highest attainable velocity is assumed to be the speed of light, a manifestation of that something, which we do not know what, but call electricity. $c = 300,000 \text{ km/sec}$. The light of a far away island universe may have travelled 100 million years until it hits the Palomar mirror. Yet in the mind-world, somehow merged with the physical world, our thought can reach that island universe in a fraction of a second (depending on the interactions of our brain cells) and being there, our thought travels back and fathoms the tiny flicker of light which is our sun and imagines the unseen little earth in space and time. What the mystic knew ages ago, the poet expressed in words:

"Thought can wing its way swifter than lightning flashes,
Or the beam that hastens on the pinions of the morn."

Now, this presentation may seem very strange to you, almost like a joke. Yet, this is the direction of research of many scientists. You have a very good idea of what travelling means in our physical world, that is the level on which our chemistry and physics operate. The travel of a train, a plane, an arrow, or a bullet rushing through space, is something very familiar to you. And you think that light travels in the same way. But you are mistaken. The action of light belongs to the subatomic level, and we simply don't know how light travels. Sometimes it seems that it consists of little bullets, sometimes of waves if we don't know what. In any case, the travel of light is totally different from the travel of a train, or the travel of a thought, which latter manifestation operates on the level of the mind-world.

That this is true, can be shown by the manifestations of certain Eastern mystics. Under certain chemical and physical and other circumstances, their mind reach a level, where it exerts strange influences on the body. These people, when in their peculiar mental state don't mind, if you thrust a dagger through their cheeks, or a sword through their belly. Not a single drop of blood is lost, and after that, they go on living, as if not most vital organs have been cut. Sick persons, with organic lesions are cured almost instantaneously, deep wounds cicatrize in a few minutes, if a state of prayer exists around them. This does not mean the incantation of words only, but the elevation of the mind to heights, in which the ordinary biological, physiological and pathological laws of our ordinary world are profoundly changed. We are people of the West, and with most of us, our primary concern is only physical comfort, business as usual, and no depression, please. But the manifestation of a depression are not caused by economical factors only, but primarily by a peculiar state of mind. A few of those economist idiots, who make a bare living by writing articles on economy (if they would be good economists, who see the money laying on the streets to be picked up, they would be in big business, instead making 5 ct per line of vague words) if a few of these experts write some article, that a depression may come - if not within the next 6 months, but surely within the next 6 years - than a mania of fear overwhelms the mind of the citizen, spreads like wildfire, and affects even the sanest brains. The housewife abandons the Sunday dinner steak, to hide away a few banknotes, the husband decides that the old shoes will do for a while, and both forget about the planned holiday trip. And as there are hundreds of millions of husbands and wives, and the minds of all intoxicated by such infectious thoughts, ^{of fear} operating on the lowest mind level - a depression comes about amidst a world of plenty and for no apparent reason - and reason is the word which stands for the next higher mind level.

We people of the 20th century simply do not realize yet, how great are the powers of the mind and how deep are the influences of the mind-world on our physical world. In order to find out, we must travel to the East - not the East of the Commissar, but a little further on, to the East of the Yogi. In any case, I have shown in previous pages, that the modern psychiatrist thinks that his profession can cure the world of its greatest ailments, war and human strife, and all the other miseries, caused only by our ignorance of the laws which operate in the world of mind.

Determinism and Free Will

The great successes of the chemical and electrical engineers of the last hundred years, have made laymen and experts believe that only the laws of ordinary physics and chemistry operate in the world. Henceforth an old creed was revived: Determinism. If we contemplate a number of billiard balls on a very smooth billiard table, having received an initial push and now are continuing to travel, collide and collide again, we should be able to determine their future course for eternity to come. In other words, the billiard balls have no free will to go where they please. And as ^{we} human beings are composed of little billiard balls, the atoms, which come in contact with the billiard balls of wind, water, earth, etc. etc. our destiny, our fate, our kismet is mapped out for us, and there is nothing we can do about it.

This very old theory was used by the men from the educational branch of the general staff of Kara Mustapha, and it made loot and rape even more attractive and secure for the Turkish soldier. The educational men of the Christian armies too promised also a heaven after ^{death} although their sexless angels with those feathery wings, were less attractive than the beautiful houri girls of the paradise of Mohamed. In the end, the Turkish conquest of Europe collapsed, not because the lines of communication were too long, but because the Turkish educationalists forgot or failed to turn the minds of the European people towards Mecca and Medina, instead of Jerusalem. Otherwise we would have a Mohamedan Europe, as we have a Mohamedan Near East and Middle East.

In our time we have seen another horrible manifestation of that belief in pre-destination. Everything was done to make the German people believe that Hitler was their pre-

destined Fuehrer. This was a very comfortable idea. The German people, trained to obey, were much perturbed by the great democratic freedoms of the Weimar republic. Somehow it made them masters of their own destiny, and forced them to fight elections campaigns and all that. Then Hitler came, declared himself as the destiny of the German nation, and henceforth he did all the thinking, which was a great comfort for the majority of Germans. And if their pre-destined Fuehrer called them to ^{fight and} die - why, as it is our destiny, we will ^{fight and} die with pleasure, and before that, we will kill off as many of the others, because it is the will of the Fuehrer, and this is the will of God. We all know the result of this madness.

The evolutionary process in our world shows us a striving towards greater and greater freedom and individuality. A stone cannot move itself, but a plant, although firmly rooted in the earth, can branch out in the space above. Later in the history of the earth, the next step was reached, living beings were created, which could move about by themselves. If you ask a paleontologists, which creatures are highest on the ladder of evolution, he will tell you: the birds, not the mammal man. Those creatures, whose feathers display sometimes colours of breath-taking beauty, they can move about in all three aggregate states, on the land, on and in the water, and in the air. But in the tertiary, a great physical catastrophe happened, not favourable to birds, but highly beneficial for the mammal man. His mind broke through into the mind-world. He reached the higher level of the universe.

In this higher level, the laws which govern the billiard balls, do not govern the atoms of brain matter. We, human beings, can decide whether we want now to look to the right or the left, to go up or to remain sitting. The Creator, who set evolution in motion, gave us this greater freedom and this greater individuality - and now we are the trustees of any evolutionary progress on earth. We can make life miserable for ourselves and for others, or we can ascend to higher levels, where peace and order reigns. And to do this, we must understand nature, and we must explore the world of mind. Experimental science has now established the fact of telepathy, thought transference, and of "extrasensory perception" even of pre-cognition.

I dwell upon all these details only, because I want you to understand ^{that} we must follow the scientists in their exploration. They can discard old ideas and errors. But some others can't, and we see how Determinism and Dialectical Materialism, and other outmoded philosophies, built on the discoveries and theories of hundred years ago, do not lead to a better world, although we believed ^{that} would. The laws of the mind-world were overlooked.

And by the way, that theory of the billiard balls has been proved wrong too. The new scientists, the atom and wave mechanics, tell us, that those little sub-atomic balls, which make up the big billiard balls, seem to behave as if they have a will of their own. This is a metaphorical analogy, but the scientists say, that these sub-atomic particles behave somehow unpredictable. We cannot determine what they may do next. Well, we are only at the beginning of this line of research.

Is this an "Iron Moral Law of Nature"???

There is a great variety of many, many species on earth. Some feed on plants, some on meat of lesser prey. So, hunting goes on all the time. But somehow - members of the same species will not hunt, kill and eat their own kind. Wolves will rather die of hunger, and will not attack a fellow-brother-wolf, and the same holds true - as it seems - with all species. Although, what is a species and what belongs to another or a sub-species is still a point of argument; but the above "moral law of nature" seems to operate fairly universal. Even experiments with some ant species are not conclusive as pointed out in foregoing pages.

But man hunts and kills his own kind. And if he is not busily engaged in this peculiar human pastime, he goes on making life miserable for his wife, or his children, or his mates, or his employees. He shows a devilish delight in tearing to pieces the achievements, the qualities, the reputation of his fellow man. Why? Why? Why? Is he mad perhaps? Has our brain tissues been attacked by a pathological perversion. Is this the price we have to pay for our evolutionary elevation? Is this an inevitable process of evolution?

Well - if this is the case, then the greatest geniuses of our species must be the greatest killers, the most perverted humans. But the contrary is true.

So, we may become accustomed to the possibility, that the mind matter of certain tyrants in the political or the family field, people whose thoughts develop at the lowest level, are sick persons. And the psychiatrist tells us, that this is indeed the case.

Then ^{we} get accustomed to the idea, that may be, certain physical or other influences prevailing on the earth surface at certain times, have caused an epidemic outbreak of madness. May be, we can discern cycles of madness and reason in our history. We have seen how epidemics break out. And we have also seen, how the reason of man can combat these diseases. And this should us give hope and should us drive on in research along such lines.

And now, I maintain that this madness of man is a disease, is only of temporary nature, and it has broken out only recently, probably 20,000 years ago. It was absent 50,000 years ago, and the species man may have dwelled in peace with each other for all the millions of years since man came into the world. And I have come to this conclusion by studying the oldest and newer "picture writing" of man. My proof is the "picture writing on the walls" of paleolithic man. It shows no signs of human warfare, only animal hunts.

Documents of prehistoric Man and of historic Man. The Picture Writings on the Walls.

In foregoing pages I have shown, how wonderful and precise methods have been developed by the archeologists. They study the finds of man who lived in the prehistoric age, that is before about 5000 B.C. or 7000 years ago. I have not told you about the interpretation of the annual rings in trees. If we cut a thousand years old sequoia tree and study the rings, we will observe stronger and weaker rings. And we will find that there is a cycle observable, which fairly well coincide with the 11 year cycle of sun-spot activities on our sun. Then we will find that there ^{are} cycles of stronger or lesser activities. And if we compare a tree felled in America and woods found in Europe, we may sometimes find similarities and determine the age of that piece of wood.

Now, we know that sun spots on our sun exert a tremendous influence on the whole life on earth. This kind of radiation falls in the group of radioactive radiation, and we know that such radiation can do all sorts of things to human tissue.

Another method of archeology is the examination of the kitchen refuse in the caves of prehistoric man. Bones of many animals are found in these layers. And from these finds some archeologists maintain that the men of neolithic time (about 10,000 - 15,000 years ago) were cannibals, whereas the men of paleolithic time (30,000 - 50,000 years ago) were not. Amidst the animal bones of neolithic refuse heaps, were found human bones, broken in the same way as we do today, to extract the marrow by sucking.

Another method is the classification of the art displayed on prehistoric pottery. From this method, the archeologists and historians have developed a determination of cycles in the history of man, coinciding with a cycle of ascendancy or decadence of art. In the foregoing pages, I have shown, that the outbursts of wonderful art, as for instance in Greece 2500 years ago, in the Renaissance 500 years ago coincide with achievements in the mental sphere, philosophy, science, etc. etc.

Lastly I have referred to a book of a psychiatrist, who compares the art of lunatics with the art of the Aztekes, and who found that the Aztekes were mad - to some extent. They indulged in human sacrifices on a horrible scale. And I am not the first to point to certain trends of modern art, which desperately resemble lunatic art. And we do not need be told, that we are living in an epoch of great madness.

The Gap in History

Wonderful as the achievements of archeologist and historians have been, one mystery remains unsolved (among many others). We can follow the records of man only about 7000 years back. Then we must stop, because the records stop coming up. In the case of Egypt and Babylon, we should believe, that those oldest records would present the first and most primitive picture writings. Instead we find that the pictures represent already alphabetical letters, and the scientists agree, that the history of these people must be longer, must go for many thousands of years back. But we can't find the records.

Well, what happened? Earthquakes, floods, mountain slides. These catastrophes could break monuments, bury them, but would not wholly destroy them.

But how about an outbreak of a human catastrophe. We know, that in such cases, the lunatics make a very good job, of destroying temples and altars, monuments and statues, until nothing, nothing remains which could indicate former glory.

Well, I don't know what happened. But the gap is there, and this is why we have divided the historic from the pre-historic time. But does there exist something which is pre-historic? Or do we simply indicate with this preposition, that we simply don't know?

The Bible as historic Document

The history recorded in the Bible goes back about 6000 years. We know that many historical happenings, mentioned in the Bible did really happen. The Bible is therefore a very accurate document.

As to the times before 6000 years, the Bible narrator can only tell in tales what happened. These are tales, which must have been transmitted by word only from generation to

generation. And as usual, these stories from dim history take on the form of allegorical tales. There is the story of the deluge. It may have happened. Babylonian scriptures tell the same tale, and so do tales of other people. Right now, the newspapers report that expeditions will go out to Mount Ararat, because the arc has been found.

What is the meaning of man's special creation, of giving him and only him a language so that he may differentiate between the beasts of the field and the fowls of the air? And what is the meaning of the story, which tells that man was driven out of the paradise, because he began to judge between good and evil, against God's command? Is this perhaps a hint of the perversion of man's brain, continued down to our times, where spinsters and bigots, shepherds, chauvinists and commissars point out the evil in others and open up holy crusades against members of the same species. Is the story of the tower of Babel, a hint of the semantic confusion, caused by vague language. On the walls of the houses in Pompei, we find the same political slogans as in our newspapers of today.

Something must have happened in prehistoric times - and not so long ago. A catastrophe which attacked man's power of mind.

In any case - there is the proof, for everyone to see - the beautifully executed drawings of paleolithic man depict only animals and animal hunts, and show no sign of human warfare against its own kind; whereas the drawings and records of historic man show mostly boasts about human hunts. The difference is too striking. We human beings like to boast. We decorate our walls with pictures of our victories and in this, paleolithic man did likewise - with one big, very big difference: he had apparently no intention to hunt and kill his own kind.

We must have gone mad in the meantime, pathologically mad.

And if we realise the full implications of this discovery, we can find out what physical and physiological circumstances brought this madness about, and furthermore, we can devise ways and means to combat this disease and to bring it to an end.

Psychosomatics, Psychological Warfare, Atom Bomb Hysteria, and what we have got to do.

In these last paragraphs I shall prove that we are already on the way to the solution of the problem, although the science workers have not yet got the impetus from the above mentioned discovery.

During the war a new branch of medical science has been perfected. It got the name of Psychosomatics. As usual, this word is formed from Greek roots, meaning soul-body. Deliberately, the word for soul has been put before the word for body. This new or very old theory says, that the soul comes before the body, or in other words, that the soul is superior to the body, and governs the body. A man in an U.S. army hospital had a terrific wound in the abdomen. Presently, he got terrible family worries. And he developed a beautiful gastric ulcer, which the doctors filmed in kodachrome, as it gradually faded away with the lessening of the family troubles.

The men in the U.S. war department, realised too, that psychology may be a better weapon than guns. We all believe that the atom bomb brought the Japanese to surrender. This is far from the truth. The damage in Hiroshima was, according to official experts' reports not bigger than in other Japanese towns, which got only ordinar bombs. (see report p. 215).

Just think of the Japanese army 5 millions strong with all weapons, rested for years and ready to fight and get killed. Even if all the Japanese towns would have been obliterated, every Japanese would have fought on in the hills, and the mountains, in the bays and on the islands of his country, ideally suited to endless guerilla warfare, and even if the last Japanese boy would have shot his last arrow, he would not have surrendered. Yet more than 70 million of people surrendered without the least offer of resistance.

A modern miracle you may say. Yes, and the explanation is psychology. I have been with the Japanese during the last years of the war. They segregated me and thousands of others in the Hongkew district of Shanghai, where they too lived (perhaps in the hope that the American bombers would not drop bombs there.) In my opinion, the ultimate factors were the broadcasts of Admiral Zacharias (I believe this is his name) He lived for many years in Japan. Most of the war leaders have been his personal friends. He spoke their language and knew their minds. And he gave them a piece of his mind in his carefully designed broadcasts. They recognized his voice and his arguments were arguments of a Japanese mind. After that, they spoke with the emperor.

It was noon on one of the first days in August 1945. I was on the street, when suddenly the loudspeakers of Japanese radioshops began to boom. And all the Japanese, men and women in the street bowed deep and remained in this state until the voice ended. It was the voice of the emperor, and he told them to surrender. After that, their will power to fight was completely broken. Never in the history of the world has a nation-wide surrender been more orderly.

The atomic bomb was only the last link in this mind struggle. The Japanese - if they surrender - must have something to "save face" - the most important item in the East. They have not been defeated by superior courage and bravery - no, only by the forces of the atom, which the enemy happened to unleash, only a few years before Japan's cyclotrons were up to mass production. That was all. This "face saving" must have played a great factor in the secret negotiations, and the U.S. war department may have dropped a big bundle of explosive and incendiary bombs and called it obligingly "atomic bomb". And if they really had an atomic bomb, not more destructive than a block buster (Seversky), the better.

Now, reporters and some scientists scare the people of the world with the atomic bomb. But the scientists of the U.S. war department are already further ahead. The bomb is outdated. Right now, reports appeared in the papers, that they have developed a gas, which stops temporarily the will power to fight, with no after effects. Well, this is the spirit. The development of weapons not to destroy humans but to preserve them. Now, the scientists should develop a gas, which lifts the human mind from the level of passion into the level of reason. Millions of people claim, that a cigarette, or a glass of wine, brings them clearer thought. May be. In any case, we can bring scientists to work on these problems. The sofa of the psycho-analyst is not enough. Chemistry (drugs, gases, etc) and physics (electrical shock treatment, etc.) can produce results on the brain cells. Right now, we witness how communists disrupt the economy of many countries by strikes, but in the communist fatherland strikes are dealt with the firing squad. You can't convince a communist. He believes in the Soviet myth, because all his other believes have been shattered and believe he must. Perhaps he can be brought to reason with medical means. It would mean peace, if we can make him see that living standards in many parts of the world are higher than in the socialist fatherland, not to speak of the civil liberties.

In this new research, we must distinguish a short term aim, and a long term aim. A good part of the war budget should be diverted to set scientists to the task of finding out what makes a man gentle and what makes him ferocious. Is it the food, the sunshine, the vitamins or something to which we shall give the name of antibellin, which subdues belligerence in a man's mind. The Kamtchatkans ask forgiveness to any animal before they must kill it. A hunter of the Huoro tribe in Central Africa who kills a leopard, must prove in court, that he acted in self-defense. (Schrenzel) Why are these "savages" so gentle? Does their food contain much antibellin? Why are some children gentle and others cruel, and why do they often change when they grow up? What are the relations between nature and nurture (Hogben)

What happened 2500 years ago in Greece? Why that terrific outburst of reason? And why the terrific outburst of madness in the Aztekes and in some people and nations in our times? What happened in prehistoric times? Why were we driven out of the paradise of peace between men, and how can we restore the physical and physiological conditions and return to a paradise of peace between men?

Now we know for sure, that human nature can be changed, in spite of the howling of many that it can't. The medical men can change human nature. And human nature has been changed many times and apparently most disastrously some 20,000 years ago. Well, we can change it to the better. We have now the scientific method.

All this research belongs to the long term policy. The short term policy is different. On the one hand, we need still weapons, and bombers, and fleets, because some lunatics who have got a stranglehold on many nations, can still only understand the "language spoken" by guns. But the public relations branch of a modern army becomes more and more important. And with this, the study of language becomes even more important. We know now, that thought is provoked by language and muddled thought is provoked by muddled language. And we know that the words which we use, are only symbols for the things of our world, for ideas of our mind. And we know that these symbols are inadequate, that many are misleading, vague, ambiguous, fallacious and even meaningless. We know that words exert a magic power on illiterate people. And we know too, that the literate people of the world have learned to read, but not yet how to think, how to employ reason, instead of blind passion.

The study of semantics becomes imperative, and with it, the teachings of semantics to the children, the future citizen. We shall evolve better and better semantical education as we go along. In the meantime, I offer semantography as one small tool, amongst many. I do not mean that people should start writing in those symbols. No. But the basic rules of semantography alone offer a very simple method as a Logic for the People as a Semantics for the Citizen, simple and easy to operate. The reader may believe what I say. I read the newspapers and I apply this method with easiness. Every vague meaning exposes itself in a fraction of a second, right in the process of reading. And I firmly believe that: once semantography is taught in the schools innumerable disputes between men and women, husbands and wives, fathers and sons, citizen and citizen would simply become impossible.

Later or simultaneously, we may start to use a few symbols on the highways, in public buildings on ships, trains and planes and for other practical purposes. Science may then use this mode of writing, as the scientists used the Latin of old - for international co-operation, for the co-ordination of research of any kind.

Later or simultaneously we may start to teach reading and writing to three quarters of the world's population. It has been proved that only literate people will take to improvements in the technique of living, be it agriculture or communal co-operation.

In all this, semantography or an improved international ideographic writing may play its part, no matter how small.

We have no time to lose, because we have everything to lose.

And everything means our liberty, our children, our family and even our life. It may take only a few years of political development, and you, dear reader, may hear the knock on your door from the secret police. They will take you away to a quick or slow death, because your thoughts do not comply perfectly with the thoughts of the official thought dictator.

"Under the threat of totalitarian ideologies, a threat which is by no means ended with Hitler's fall," writes Arthur Koestler, "the decaying values of the West appear in a new, nostalgically attractive light. Human rights and moral traditions which fifty years ago we took for granted, are abolished in large parts of the world and in the process of abolition in others. Habeas corpus, freedom of speech, civil law, respect for the individual life, the unwritten codes of certain minimum decencies of conduct - how stale and ridiculous all these appeared at a time, when utopia seemed at hand, and how desperately important they are now, when we stand with our backs to the wall. The tragedy is that only those realize what oxygen means who have known the torture of suffocation."

Koestler knows it, because he lived in Russia, went away ^{in despair} to fight for his belief in Spain and tasted the concentration camps of democratic France. And I went through the hells of Dachau and Buchenwald and through Japanese segregation. Nevertheless, we still believe in the high purpose of man, in the evolutionary spirit which pervades the universe, and creates order out of disorder.

A parting word

and
One/a half years have passed, since I started to write this last manuscript. I typed it directly onto the wax stencil, and this may excuse the many shortcomings of it. If I have not satisfied you, dear reader, believe me, I am not satisfied myself. But we must strive for better and better perfection. I thank you for following me to the end. I hope that you too believe, that this new idea could become the focal point of a world-wide movement for international co-operation and mutual understanding.

It remains now for me to thank the few persons, who helped me in my work. First, my wife who untiringly encouraged and helped me. My brother, Henry, Mrs. Betty Stoltenhoff, Mr. Russell Cope, Mr. Sydney Tomholt, Mr. J. C. Lindsay, Mr. Fritz Treuer, and above all my loving wife Claire. I thank them and also those, who are going to help me in the future.

Last, but not least, I wish to express my thanks to the Australian people. And what I have to say, is somehow in connection with the foregoing pages. The Non-British people of the other continents know little or nothing about Australia. For them it must be a wilderness with kangaroos hopping around and natives dodging boomerangs. For many newcomers, it is therefore a great surprise seeing Australia. For me, it was the surprise of my life, although I have travelled a lot.

Here in Australia a miracle has happened in our times. Pioneers with the democratic liberties at heart have created in an incredible short time of little more than 150 years social communities with higher standards of living and liberties, than anywhere in the world. And they created all this out of nothing. The country offered at first only starvation. Now, 80% and more of the people live in one family cottages with gardens and all the comforts. More than 50% own their own houses. The basic wage of a labourer is higher than anywhere else. He and his family can live. As to the civil liberties, they had the eight-hour-day already in the eighties of the last century. The English playwright Geoffrey Thomas said: "Australia has a chance to offer, perhaps the last chance for the human race - the chance to give mankind a new direction altogether." If you ask an Australian, why the people here are so "happy-go-lucky," he will earnestly point to the sunshine, and tell you about possible influences of the climate, the sea, the beauty, the land. I know that only here could my thoughts be formed best - in freedom, and in peace.

Should this manuscript find no publisher, I shall supply the greatest libraries with a duplicated copy, in the hope that a future researcher may come across and use it. I inform him that I shall deposit all ^{my} former manuscripts and note books for the library to be chosen by my trustees. And I wish him luck.

Sydney, July 1949

C K Bliss

THE SEMANTOGRAPHY SERIES

The Story of the Struggle for Semantography

from 1949 to 1965

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 1 large page, pictures,
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- 16 Semantography and Publishers
 The 3 colour leaflet of No. 15 adapted for an approach to publishers
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- 17 Semantography and Patrons of the Art
The 3 colour leaflet of No. 15 adapted for an approach to patrons
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 1 large page, ca. 550 words
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 6 large pages, ca. 4000 words, 18 symbols
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- 49 Professor G. Patrick Meredith: Review of Semantography
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and comments by the author of Semantography
8 large pages, ca. 6000 words
- 50 Professors and Students of Sydney University write about Semantography
Text of the opening and closing address of Prof. A.G. Mitchell at
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the students papers.
2 large pages, ca. 700 words
- 51 The best Years of my Life
Biographical Notes
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- 52 Unified Symbolism for World Understanding in Science
Pamphlet for Prof. O.L. Reiser's lecture before the American
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4 pages, ca. 1200 words, 60 symbols
- 53 Sir Richard Paget and Semantography
A letter by the author of "Human Speech," "Babel," etc.
inventor of a gesture symbolism for the born deaf and dumb
1 large page, ca. 250 words
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of the Correspondence Courses on Semantography
4 large pages, ca. 1800 words
- 55 Linguistics, Logic, Semantics and Semantography
The manuscript for a popular book for juveniles and adults
(see also No. 56)
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A continuation of No. 55
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Outline of small books on various aspects and applications
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1 large page, ca. 250 words
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Biographical Notes
4 large pages, ca. 2500 words
- 59 Vanderjagt's Formula in Semantography
A discussion of B.G.H. Vanderjagt's formula of the components of
a material product as shown in O.L. Reiser's writings
2 large pages, ca. 1200 words, 12 symbols
- 60 To the Friends of this "One Writing for One World"
An appeal to patrons of the arts
1 page, ca. 250 words
- 61 The Sydney Morning Herald and Semantography
Text of two articles and 5 letters to the editor published in
the Sydney Morning Herald
4 large pages, ca. 2000 words, 20 symbols
- 62 Semantography One Writing for One World
An article by W.A. Heaney in the Magazine of the New
England University College, Armidale, N.S.W.
Brochure, ca. 4000 words, 70 symbols
- 63 Bliss and Semantography
An article by Albert Norman in the Christian Science Monitor,
Boston
2 pages, ca. 900 words
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Correspondence Course (see also No. 39, and 65)
7 large pages, ca. 4000 words, 210 symbols

- No.

- 65 Third Lesson on the Graphics of Semantography
Correspondence Course (see also No. 39 and 64)
7 large pages, ca. 4000 words, 150 symbols
- 66 Second Lesson on the Logic and Semantics of Semantography
Correspondence Course (see No. 31, 67, 68)
12 large pages, ca. 8500 words, 75 symbols
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Correspondence Course (see also No. 31, 66, 68)
8 large pages, ca. 5000 words, 15 symbols
- 68 Fourth Lesson on the Logic and Semantics of Semantography
Correspondence Course (see also No. 31, 66 and 67)
10 large pages, ca. 7000 words, 20 symbols
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An article in the Journal of the Australian Broadcasting Commission
1 large page, 800 words, 32 symbols
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- 74 Korzybski's General Semantics and Semantography
An introduction to the Semantics of Semantography
6 large pages, ca. 3000 words, 12 symbols
- 75 Semantography and the Patrons of the Arts
A letter on the difficulties of promoting a new idea, written
to L. L. Casteter, late of Butler University, Indianapolis
3 large pages, ca. 2000 words
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1 large page, ca. 600 words
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An exposition following the lectures given on Semantography
7 large pages, ca. 3500 words
- 78 The Semantographer
A picture article on Bliss and his work in the picture
magazine "People" of Sydney
4 pages, 6 pictures, ca. 3000 words, 38 symbols
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An approach following lectures at the University
1 page, ca. 400 words
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An exposition of Semantography and its treatment by the Press
8 large pages, ca. 4000 words

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Two letters to Editors
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Exposition, approach, correspondence
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An article on Bliss' discovery in paleolithic caves, commissioned
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Article by Dr. Douglas N. Everingham (Sydney)
A sequel to article No. 85 (see also 87)
3 large pages, ca. 2400 words
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Open letter by Dr. Douglas N. Everingham in the Medical Journal
of Australia, commenting on Chisholm's and Bliss' work
(see No. 85, 86)
2 large pages, ca. 900 words
- 88 A Letter to Bertrand Russell
reviewing the progress of Semantography (see also No. 8 and 167)
3 pages, ca. 1800 words
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2 pages, ca. 1300 words
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(see also No. 175)
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A letter
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An approach
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A letter to the editors (see No. 50, 77)
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The operational mind rules of Semantography
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- 130 Selling Semantography to America
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Letters and biographical notes
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A correspondence with a controversy
9 large pages, ca. 4500 words
- 146 The Story of a Newspaper Article on Semantography for Road Safety Signs
An Article inspired by Dr. D. N. Everingham and a controversy
10 large pages, ca. 4500 words
- 147 Semantography and Prof. Lancelot Hogben
A correspondence with the author of Interglossa,
The Loom of Language, etc. giving a particular demonstration of
Semantography
25 large pages, ca. 12,000 words
- 148 New Prospectus on Semantography
1 large page, ca. 300 words
- 149 Prospectus on Prof. O. L. Reiser's Paper on Semantography
(see full title No. 150)
1 large page, ca. 150 words
- 150 Unified Symbolism for World Understanding in Science by Prof. O.L.Reiser
including Bliss Symbols (Semantography) and Logic, Cybernetics and
Semantics.
A paper read in parts at the annual meeting of the American Assoc-
iation for the Advancement of Science and the Conference of the

- International Society of Significs. (For the list of chapters see the catalog, issue No. 163)
52 large pages, ca. 32,000 words, many symbols
- 151 Semantography and the Director-General of Education (N.S.W.)
A correspondence prior to the demonstration of Semantography
(see the following issues No. 152, 153, 154, 155)
14 large pages, ca. 7000 words
- 152 Bliss' Demonstration of Semantography for Secondary School Education
This Submission on Semantography is the first issue concerning
the appearance of Bliss before the ministerial committee enquiring
into secondary school education. This Submission on Semantography
is followed by issues No. 153 - 155 (see also No. 151)
6 large pages, ca. 3000 words
- 153 Semantography for Secondary School Education
Draft of the Speech before the committee of educators (see 151-155)
10 pages, ca. 5000 words, symbols
- 154 Correction of the Official Record (see No. 155)
of Bliss' lecture on Semantography before the ministerial
committee (see No. 151 - 155)
12 large pages, ca. 6000 words
- 155 The Official Record of Bliss' Lecture on Semantography
before the ministerial committee. Being full of stenographic
errors and omissions, it has been replaced by No. 154.
7 large pages, ca. 3200 words
- 156 Search for Purpose
A review of Arthur E. Morgan's book "Search for Purpose" and a
comparison with Bliss' search for purpose in present-day theories
on evolution (see No. 120ff Semantography and the ultimate Meanings
of Mankind)
18 large pages, ca. 9000 words
- 157 To the Trustees of Humanity
A new leaflet on Semantography
2 pages, ca. 1000 words
- 158 The Swedish Cooperative Movement and Semantography
A controversy with the director of publications
10 large pages, ca. 5000 words
- 159 Semantography for medical Publications
A controversy on international languages in the Medical Journal
of Australia, esp. a letter by Dr. D. N. Everingham
2 large pages, ca. 900 words
- 160 Semantography and Prof. Lyman Bryson
A correspondence with a scholar on symbolism
4 large pages, ca. 2000 words
- 161 Symbolism, Semantics, Semantography and Social Synthesis
Prof. O.L. Reiser's paper for the 5th Congress of the Association
for the scientific Study of Symbolism, Paris 1956
13 pages, ca. 6000 words
- 162 Semantographie - Symboles Bliss, (in French)
Bliss' introductory paper for the 5th Congress on Symbolism,
Paris, 1956, including the issues No. 52 and 157 (in English)
8 pages, ca. 3200 words
- 163 New Catalog of the Books on Semantography
containing lists of chapters
6 pages, ca. 1500 words

- 164 Semantics and Psychiatry
Lecture by Dr. D. N. Everingham at the Australian Medical Congress in Sydney, 1955.
7 pages, ca. 3,500 words.
- 165 First Lecture on Semantography at Sydney University by C. K. Bliss
1951 complete text on 18 pages, ca. 11,500 words.
- 166 The United Nations Organisation and Semantography
Report on approaches since 1949.
12 pages, ca. 8,000 words.
- 167 Unesco and Semantography
Report on approaches since 1945, articles, letters, etc.
29 pages, ca. 18,000 words.
- 168 The Australian Unesco Authorities and Semantography
Report on approaches since 1949.
8 pages, ca. 5,000 words.
- 169 Reviews of Publications on Semantography
which appeared in various journals during 1950-1960.
8 pages, ca. 5,000 words.
- 170 Bertrand Russell and Semantography
Report on the meeting, discussion, letters, etc.
19 pages, ca. 12,000 words.
- 171 Seven Letters on Semantography to Albert Einstein
On the relativity of words, referring to the individual system of reference, the mind.
12 pages, ca. 7,500 words.
- 172 Semantography and Neurath's Isotypes
A correspondence on the differences and similarities and a plan for co-operation.
28 pages, ca. 17,500 words.
- 173 The Australian National University and Semantography
Report on approaches since 1949.
23 pages, ca. 14,500 words.
- 174 The American Scientific Foundations and Semantography
Report on approaches, articles, letters, etc.
19 pages, ca. 12,500 words.
- 175 Semantography and the Illiteracy Problem in New Guinea
Report on applications and approaches since 1949.
16 pages, ca. 10,000 words.
- 176 Semantography, Basic English, C. K. Ogden and I. A. Richards
A curious controversy.
3 pages, ca. 1,800 words.
- 177 The Australian Professoriate and Semantography
Report on approaches since 1951.
29 pages, ca. 18,000 words.
- 178 The International Language Movement and Semantography
Reports, letters, controversies, etc.
44 pages, ca. 25,000 words.
- 179 A Challenge to every Linguist
Reprint of an article on Semantography and its Obstacles, from the International Language Review.
4 pages, ca. 2,500 words.
- 180 The Australian Commonwealth Scientific and Industrial Research Organisation and Semantography
Report on approaches since 1950.
18 pages, ca. 12,000 words.
- 181 Are Educators interested in new Ideas in Education?
A Controversy in letters and articles.
38 pages, ca. 24,000 words.
- 182 The large Typewriter Companies and Semantography
Report on approaches since 1949.
18 pages, ca. 12,000 words.

- 183 Prof. Stuart C. Dodd's Model English and Tilp
Excerpts from articles, letters, etc.
12 pages, ca. 6,000 words.
- 184 Scholars and Semantography
Report on approaches to a number of professional scholars.
26 pages, ca. 17,000 words.
- 185 Professor Oliver L. Reiser's World Philosophy and Semantography
A Report, reviews of his books, and Bliss' Essay on "Professor Reiser's World Creature"
24 pages, ca. 15,000 words.
- 186 A Blissymbolics Primer
app. 50 pages (to be completed).
- 187 Bliss and Blabla
A Manuscript of Articles for a controversial Journal on Semantics.
49 pages, ca. 30,000 words.
- 188 India and Semantography
A Reprint from the scientific Journal Darshana International.
7 pages, ca. 2,000 words.
- 189 A semantic Analysis of the scientific Ballyhoo on "Nuclear Weapons"
A critical Evaluation of Newspaper Reports and Articles.
28 large pages, ca. 18,000 words.
- 190 The United States Armed Forces and Semantography
A Memorandum and Letters.
6 pages, ca. 4,000 words.
- 191 Semantography and the Road Safety Authorities
Report on approaches.
6 pages, ca. 4,000 words.
- 192 Semantography and Brandeis University
Report on an approach.
9 pages, 6,000 words.
- 193 Semantography and the Professional Philosophers
Report on approaches (to be completed).
- 194 American Magazines and Semantography
Report on approaches, letters, etc.
17 pages, ca. 11,000 words.
- 195 Semantography and Machine Translation
Report, letters, etc.
10 pages, ca. 6,000 words.
- 196 Scholarly Lunacy
Essay on scholarly language and theories.
24 pages, ca. 10,000 words.
- 197 Revolt against the Educators, and A Jury for the Pioneer
A critical Essay on Education and a Proposal.
50 pages, ca. 30,000 words.
- 198 The Writing of To-morrow
Reprint of 2 Articles from the Sydney Sun-Herald.
2 pages, ca. 1,000 words.
- 199 Report and Reflections on the foregoing Issues No. 101-198
A Review similar to Issue N. 99 (to be completed).
- 200 From World Writing to Semantography and Blissymbolics
The Necessity of changing Terms (to be completed).
- 201 Catalog of the Issues from No. 201 onwards (to be completed)
- 202 In Search of a logical God
A complete book on the Idea, Philosophy and Ethics of Semantography.
146 pages, ca. 95,000 words.
- 203 Everyone's simple Logic and Semantics
Two complete books.
250 pages, ca. 160,000 words.

FORTY MORE ISSUES ARE IN PREPARATION WHEN THIS BOOK GOES TO PRINT

EPILOGUE

written in 1965 for this second edition

TO "WHOM" DO WE OWE THIS WORK?

Since primeval man began to realize his suffering and his dying, since he began to form thoughts and the words for them, a cry has risen in untold woes and wails: "WHY?"

And now in our time, when our suffering and dying is being multiplied millions of times by man-made bullets, and man-made bombs, we demand an answer to our cry:

**"Why do we live? Why do we die?
Why do we suffer painfully? Why?"**

**Why are the innocents punished with misery?
Why do the wicked wax wealthy in luxury?"**

**Why each for himself, and not for another?
Why do we fight wars, and massacre each other?"**

**And why is a God of Justice and Mercy
Without any justice, without any mercy?"**

**Why let He His children so suffer and cry:
Why?"**

"WHY?" we ask the priests and the rabbis. But they tell us that we are not clever enough to understand God's inscrutable will and way. "God doesn't exist!" we say. But they tell us to pray—and to pay.

"WHY?" we ask the professors and scientists. But their answer is even more senseless. They tell us that we are only the product of chaotic collisions and combinations, mutations and mutilations of atoms and cells, without any aim, sense, design, nor purpose. Our universe is chaos, and in chaos only the fittest survive, they say. And they tell us to pay, for teaching this nonsense to our children.

What else can they say? How else can the priests and the professors "explain" the cruelties inflicted upon mankind by the rulers of human communities, who make us suffer and die by the millions?

How else can they "explain away" the fact that trillions of plant eating animals don't kill, that even meat eating animals like lions and tigers don't kill their own kind, that man is the only animal that kills its own kind, because words of our rulers make us kill our fellowmen.

How else can they hide from us the fact that in the cell communities of all creatures the supreme law is: "All for One, and One for All," that cells co-operate and help each other when they build their organism, and restore to health injured organs.

How can our wise men ever explain the fact that cells can manufacture strange chemicals which induce love and care, conscience and courage in parent birds and animals, making them feed and teach, protect and defend their helpless children, so that they shall survive.

Is this the chaos our professors talk about? Or does it not prove that ethics is a natural force like electricity? Is this the ethical power our priests call God, Jehovah, Allah or other deities in whose names men have massacred each other? It can't be!

What is the ultimate design and purpose of this ethical agents that pervades all living atoms, and the whole universe? **It is the creation of order out of disorder, harmony out of disharmony.**

Every intelligent boy and girl can see (once it has been pointed out to them) that within the molecules which build a budding flower, a busy bee, a baby bird, a baby animal, a human baby, **A POWER OF MIRACULOUS CO-OPERATION BETWEEN THE ATOMS AND THEIR CELLS IS AT WORK**, in which every cell "unselfishly acts for the interests of the entire community," as Alexis Carrel observed.

How did all the creatures come about? On inhospitable planets living atoms faced many dangers. They co-operated and helped each other, and over the millions of years, they invented the most amazing electronic and chemical organs and organisms for one purpose only: **THAT THEIR CHILDREN SHALL SURVIVE AND GO ON INVENTING HIGHER ORGANISMS OF HIGHER HARMONY.**

Their striving culminated in the emergence of man with the conscious power of reason and language. But here a new deadly danger arose: extermination through words. In all civilisations crafty confidencemen arose, who used words of "divine rights and revelations" to rule us, and to exhort us to kill our fellowmen, who speak and pray in another language, or to another God.

Again our atomic cell engineers, inspired by the ethical power, set to work to overcome this danger. In the brain cells of millions of men they induced the idea of one language for all, one language with logic and without lies, one language which could stop the slaughter, one language which could help us to become one world community of higher harmony.

These millions of men and women cried out to our professors of languages to teach mankind this one international language. But the professors believe in the theory of chaos, even in language. They refuse to remove idiotic irregularities in all languages. They refuse to teach Esperanto. They refused to take an interest in my work.

The ethical atomic power that works in the cells of all creatures brought my parents together, brought me into the world, and induced in my parents love and care, so that I shall survive, so that my cells shall continue to strive for higher harmony.



THE LIBRARY OF CONGRESS

WASHINGTON 25, D. C.

Bliss, Charles Kasiel.

Semantography, a non-alphabetical symbol writing, readable in all languages; a practical tool for general international communication, especially in science, industry, commerce, traffic, etc., and for semantical education, based on the principles of ideographic writing and chemical symbolism. Sydney, Institute for Semantography, '1949.

3 v. (700 p.) illus. 29 cm.

1. Pasigraphy. I. Title.

Z102.B55



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52-65550 †

Library of Congress

{3}

This is the framed composite picture, of an old photograph and a library index card, which is before me, when I bring my thoughts to paper.

My parents, as they looked, when I looked up to them as a little child. Jeanette my mother, who taught me to love poetry and literature, and my father Michel Anchel (from Michel the Angel) who taught me to love the laws of nature. They instilled in me the idea, that ideals are the best idea. They set all their hopes on me.

Proof that I have not deserted their hopes is the index card of the Library of Congress. This library was the first to buy my miserably mimeographed books, and to give a standing order for all my future writings. These librarians, and later others, recognized the value of my work for future generations. They gave me the courage to carry on.

My parents and my Claire have taught me the most important lesson in semantics every human being needs to know. Most people believe that married life must be like the weather: days of sunshine, alternating with thunderstorms and miseries.

What a misleading metaphor! Most miseries of married life are brought about by hurting words, of which our teachers have only taught us the pronunciation, spelling and grammar.

My parents and my Claire knew that such words can cause wounds never to heal, but ever to fester. They avoided such words. But many other marriages are marred, and made miserable by hurting words.

No teacher anywhere in the world teaches children how to recognize, and how to make harmless such words. There is no such subject in any school. My work is the first "textbook" that can teach this most important lesson of semantics to all mankind, and in all languages. This I owe to my parents, and my Claire, and ultimately to the ethical power of the Universe that makes all living atoms strive for higher harmony.

When my parents were dead, I needed courage and help. Claire gave it to me in full measure. Had I been saddled with a demanding wife, had I been saddened by making money only, this work would never have come to light.

In 1938 I was caught up in the most murderous maelstrom of death by words. I went through the hells of extermination camps, but was freed by the ethical power working in the cells of my Claire. She defied death and rescued me, and made me survive.

At last, in the freedom of a free country, my cells of brain and body could set to work to produce a new idea for overcoming the danger of death by demagogic words.

It is not me, who did it. The cells that built my parents, my Claire, and myself, are only infinitesimal links of living atoms induced and inspired by that ethical force that, like the force of electricity, pervades the whole universe.

To this ethical power we owe this work.

Claire and I believed in the true meaning of the Alma Mater, the Fostering Mother of all ideas: the University. We were sure that the professors of all universities would recognize the pioneering work of a new idea. After publication in 1949 Claire wrote thousands of letters to thousands of educators and educational institutions. There was no response.

When our hopes were shattered, when Claire saw me sinking into despair, her heart broke. In 1953 she suffered her first heart attack. She fought on bravely for eight more years, helping me more than she could.

When she died on that tragic day of 14th August, 1961, life died within me. For two terrible years I went through the darkness of desolation. When the second anniversary of her death came, I made in her memory the following 12 page booklet. I sent it to all who have known her. They were all her friends. She had no enemies.

IN MEMORIAM CLAIRE BLISS

She helped this work along. She made it possible.



Claire when she was 20

For the second time the sad anniversary has arrived when our Claire closed her eyes for the last time. I am writing to you, asking you to give a few kind thoughts to her during the next days. I have come to believe that her soul is eternal, and that she comes into my mind when her soul is near me. And she comes to me every day. She will come to you too in loving thought when you think of her.

You have known her. But you may not know what she meant—and still means—to me. Therefore I am sending you in these pages a little poem which I wrote to her on the 29th November 1939 from London. When I was in Dachau and Buchenwald she had fought fearlessly the Gestapo. Many times the blackguards warned her that she—a “German Aryan”—brings herself in mortal danger by fighting for a Jew. “He is innocent!” she cried, “he is innocent!” In the end she won. I was released, but had to leave immediately for England.

From London I made frantic efforts to get her over to me. But the war broke out. I tried desperately to get her out of Nazi Germany, and to save her, as she had saved me. I sent her to my family in Czernowitz Roumania. But the authorities did not allow her to stay there indefinitely. Then, writing in desperation to all my friends in the world to help me to help her, I found true friends. My old friend Ing. Simon Klein and his good wife Berta, invited her to Greece. Then Mussolini attacked Greece. In the meantime, the Russians had attacked Roumania and my poor family in Czernowitz was declared “capitalists”. The small shops of my brothers were taken away from them, and they were not allowed to get work anywhere.

I could not help them, but I could still help Claire. There was only one way for us to come together, and stay together, come what may. We had to go around the whole globe. After surmounting great difficulties I managed to go West across the Atlantic, Canada, the Pacific and Japan, and then on to Shanghai in China, where my cousin Paula lived with her husband Kurt Beck.

Claire went East, travelling alone from Greece to Turkey, then across the Black Sea to Russia, then across frost and snowbound Siberia and Manchuria, and then across the Yellow Sea in a tramp steamer, sitting on the bare floor among Japanese soldiers on the open deck.

She was then 58. She had marshalled all her strength and all courage to stay alive, and follow all my directives, in order that I could complete the masterpiece of my life: to bring her to me across the warring countries, across the hostile continents and across the cruel seas. On Christmas Eve 1940 we embraced each other, after 3 years of terrible separation.

Then her task completed, all her strength ebbed away, and she broke down. I nursed her back to health, until she was her old cheerful self again.



This was our New Years card which we sent out to all friends in the world, and to our family in Russian-occupied Czernowitz. Here you can see us both, how we made a living with our beloved hobby of Vienna. We made movies to order and edited and titled movies of Shanghai residents. This picture card is the one which was received by my family, and they all were very happy to have good news from us. We received news from them too.

But life in war-torn Shanghai was hard. Disaster came to Claire. She contracted typhoid fever. I refused to give her up to a hospital, but nursed her day and night until she was out of danger. Then she broke her arm, and had to lay in a heavy plastercast during the horrible heat of a torrid Shanghai summer.

As if all this was not enough, the Japanese drove us into the Hongkew Ghetto. Then American bombs fell among us, killing many people and setting the houses around us on fire. Somehow we lived through it all, even cheerfully, because we were together, Then peace came, and my cousin Karl sent us and his sister Paula and husband Kurt an entry permit for Australia. On the 14th July 1946, we joined you all here in happy Australia, and lived together here for 15 happy years. But her heroic heart was damaged by all her worries for me. On the 14th August 1961 it could not go on any longer.

Claire died as she had lived: fearless and full of love. Can you imagine that a person, who knows that she is going to die, could be radiantly happy, could sing and laugh and love in ethereal exuberance? When I saw her in this state of euphoria, I did not (and did not want to) realize its true meaning. Instead I took it as a good sign that the crisis is over, and that she is again on the road to recovery. But Claire knew it better.

The name given to her by her parents is Klara in German, and Claire in French and English. The word comes from the Latin "clarus" meaning clear, clean, pure, lucid, bright, luminous, cloudless, serene, hence unclouded by passion. These words do indeed describe her character.

But there is a word in German which is formed by her name, and which has quite a different meaning. The word is "verklaert." It means that state of being, in which I saw Claire in her last conscious hours. It means "transfigured", a supernatural change in the appearance of a person who seems not to belong to this world any more. Claire was indeed "verklaert."

When she woke up after an injection, she was radiant with beauty and happiness. She laughed like a young girl, and was exuberant with joy. Then she began to sing an old melancholic Viennese song, but there was no melancholy in her musical voice. She sang:

*"Es wird a Wein sein
Doch mir wern nimmer sein!
's wird schoene Maederln geben,
Doch mir wern nimmer leben!"*

*"A wine will be,
But not we!
Nice girls will be,
Dead we shall be!"*

And then she took my head into her hands, looked deeply into my eyes, and said to me in English:

“My Darling! I am going to die! I loved you all the time, and I am going to love you after my death, until your last day, and your last breath!”

And then she kissed me for the last time.

I am not a writer, nor a poet, and I never indulged in poetry as a means of emotional expression. Moreover, in 1939 I was past middle-age, and past romance. The more so are my words, which follow, witness to that wonderful creature which was Claire. I had completely forgotten my little poetical love letters from London. I found them after her death in a secret pocket of her wallet. She had carried them through Greece and Turkey, Russia and Siberia, Shanghai and Sydney for fully 22 years. And herebelow is one of them. For those who don't understand German I add a translation, which however cannot express the emotional intensity of the words in our mother tongue.

Carl, a refugee in England to



21. 11. 29

An die ferne Geliebte.

In Deinem Herze bin ich wohlgeborgen.
 Mit Dir zusammen kann ich glücklich sein
 An Deiner Brust vergesse ich die Sorgen
 Ich kann nur glücklich sein mit Dir allein.

Du bist die Frau und das Leben,
 Du bist die Ruh und die Glückseligkeit
 Du kannst so viel von Deiner Liebe geben
 Und Deine Seele ist voll Hingebung.

Du bist die liebste Frau die mir begegnet
 Die mir so viel gegeben hat.
 Für alle Deine Liebe sei gesegnet
 Du mein geliebte Wunderkammer!

Claire, a refugee in Roumania

London, 29th November, 1939

AN DIE FERNE GELIEBTE

*In Deinem Herzen bin ich wohlgeborgen.
Mit Dir zusammen kann ich froehlich sein!
An Deiner Brust vergesse ich die Sorgen.
Ich kann nur gluecklich sein mit Dir allein!*

*Du bist die Treue und das Leben.
Du bist die Ruh und die Glueckseligkeit!
Du kannst so viel von Deiner Liebe geben.
Und Deine Seele ist voll Heiterkeit.*

*Du bist die liebste Frau die mir begegnet,
Die mir so viel gegeben hat.
Fuer alle Deine Liebe sei gesegnet,
Du mein geliebter Wanderkamerad!*

Translation overleaf

Translation

London, 29th November, 1939

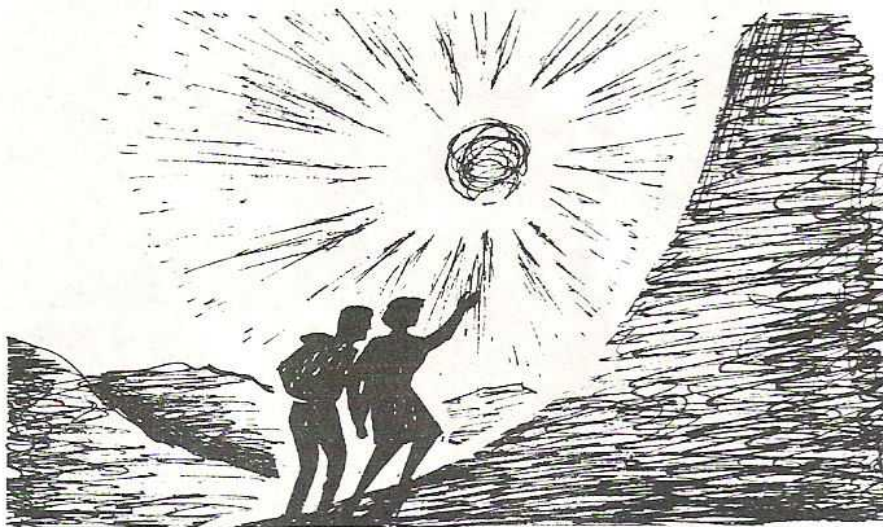
TO MY LOVE—SO FAR AWAY

*Within your Heart there is my loving nest.
With you together I feel joyous too
My worries vanish at your loving breast.
I can be happy only when I am with you!*

*You are my Strength, my Faith, and all my Life!
You are my Rest, my Peace, my Blessedness!
You are my Life Companion and my Wife.
And in your Soul is Heaven's Happiness!*

*You are the finest Woman whom I found,
Who gave me all the fullness of her Heart.
For all your Love be blessed beyond bound,
You my beloved "Wanderkamerad!"*

The meaning of "Wanderkamerad", as we understood it, is most difficult to translate. It does not mean "wander comrade." It means much more than "hiking companion".



For us, it meant walking hand in hand through flowering mountain meadows up to the towering mountain peaks.



But it also meant walking hand in hand through the dark abyss of despair, and through the valley of the shadow of death.

Wanderkameraden forever!



Claire when she was 70

Not even Death do us part!

Read "Claire is in the stars," p. 60

Is this the End, or a new Beginning?

The picture on the foregoing page was taken in 1950, when we both were full of happiness and hope. Then our hopes died. Then Claire died. Now, I shall die soon.

Will this work die with me? Will this be the end, or a new beginning?

My hopes rest with the librarians of mankind, with my future readers, and ultimately with the ethical power working in the brain cells of all human beings. May they overcome the dangers of words in all languages, before more millions of men, women and children will die because of words.

The ethical power will work in the brain cells of my readers, will make them stand up, and speak up, and bring down the forces of chaos, that prevent any improvement of man's most important invention for communication and co-operation: LANGUAGE.

Sydney, 1965.

C.K.B.

DICTIONARY INDEX

OF SYBOLISED MEANINGS

I N T R O D U C T I O N

"Why don't you make a dictionary, Mr. Bliss?" people asked. My answer was (and still is):

In 1949, when Claire and I finished mimeographing the 3 volumes, we felt sure that active interest shown by the universities would result in a publication grant by one of the rich scientific foundations. But when all the thousands of pleading letters met with no response, our disappointment and despair was more than we could bear. Moreover, I had no time and no money to make a dictionary. I had to work for our livelihood, and Claire helped me with all her heart.

A number of serious students of my work were not discouraged by the lack of a dictionary. They studied the basic symbol elements and the basic chapters, and were able to build up logically new compound meanings. They wrote us letters in symbols. Even children wrote, composing boldly new symbol combinations for words they needed. Among my readers was Professor Eric de Grolier of Paris, who used my symbols for highly abstract philosophical statements. He praised my work in Unesco publications. Unesco, however, did nothing. Mr. Owe Bruno Fahlke, a computer engineer of West Berlin, wrote statements about highly scientific computer electronics. Dr. Douglas N. Everingham of Rockhampton, Australia, used my symbols for definitions in psychiatry. Other students used my symbols in other fields.

These letters brought tears of joy to our eyes. They proved beyond doubt that my symbols are practical. The thousands of meanings symbolized in this book, and listed in the following "dictionary index" should convince any doubting reader.

Of course, this index is not a dictionary. It is incomplete, and the symbols are not shown along the listed words, only the page numbers where they can be found. Furthermore, the second part is missing, the one listing first the symbols, then the words. Such a dictionary is not difficult to make. Chinese dictionaries and telephone books are simply arranged by the number and shape of strokes. Anyone can learn to handle them. I did.

In alphabetical dictionaries the sequence is established by the alphabet, and the subsequences aa, ab, ac, then aaa, aab, aac, and so on. In our geometrical dictionary the first sequence would be dot, short line, long line, followed by the subsequence straight horizontal, vertical, oblique line, then curved lines up to a full circle, then all combinations in this order. Unbelievable as it may seem, our symbol dictionary would be easier to handle than an alphabetical one, as the following example may demonstrate.

^ Somewhere along our line sequences we would arrive at the symbol meaning a man. There may be then a whole page showing first the man symbol, followed by the symbols denoting the occupation as builder, electrician, mechanic, optician, soldier, surgeon, etc. In an alphabetical dictionary all these meanings would be dispersed in many pages. Here we would have them neatly arranged and easy to find.

All that is needed is the fulfillment of the words of Bertrand Russell who wrote in 1950:

"Any man or men who will spend the money necessary to get this work printed will, in my opinion, be performing an important service to mankind".

May this imperfect book, and this incomplete dictionary index bring forth at last active support from benefactors and foundations, so that properly prepared textbooks and dictionaries be printed and published. I shall not see this day. You, dear reader, may be the one who will continue this work for a better future of humanity.

HOW TO USE THIS INDEX AND AVOID FRUSTRATION

Remember, this is not a dictionary. It is only a list of the words shown underneath the symbols. Remember too that no dictionary is ever complete. Many words and irregular grammatical derivations are often not listed, and frustrate the foreigner (and native).

Realize that our symbols have one great advantage unheard-of in any language and any dictionary. One symbol can be made to stand for all grammatical derivations and even for many words of different spelling, but similar meaning (synonyms). One example will make this clear, and will help you to find any word and the symbol for it. In the following example, clusters of words are shown within rectangles. The most commonly used words are underlined for reasons which will be explained later.

This small circle o pictures the mouth, and with (or without) the small Action indicator on top thus: $\overset{\circ}{o}$ stands for all verbs:

<p><u>to speak</u>, say, talk, tell, utter, narrate, report, voice, express, announce, pronounce, proclaim, make known, hold forth, read aloud, etc., and dozens of similar synonyms.</p>

Put the big Action indicator before the mouth symbol, thus: Λo and you get the verbal nouns:

speech, saying, talk, tale, utterance, narration, reporting, announcement, pronouncement, proclamation, and more of such words.

Put one or two of the three small indicators for past:) for future: (and/or for the conditional tense: ? on top of the mouth symbol, thus: ó or thus: ó̇ or thus: ó̇̇, and you get the grammatical tenses have spoken, will speak, may speak, etc. Then you can forget about the complicated and unnecessary derivations: have had, had had, may have had, would have had, and many more such monstrosities in all languages.

Put the picture of a man in front, thus: \wedge^o and you get:

speaker, spokesman, announcer, pronouncer, narrator, talker, storyteller, etc.

Put the outline of the brain, thus: \cap and its negative (minus) evaluation, thus: -! after the mouth symbol, thus: $o\cap!$ and you get all negative (bad) evaluations, such as:

chatter, prattle, gabble, rant, gossip, etc. And with the \wedge symbol: chatterer, prattler, gossipier, windbag, rabble rouser, etc., etc.

Put the positive (plus) evaluation, thus: +! under the mind symbol $\Psi!$ and after the mouth symbol, thus: $o\Psi!$ and you get all positive (good) evaluations:

lecture, orate, recite, declaim, etc., and $\wedge o\Psi!$ lecturer, orator, reciter, declamator, etc.

Put an exclamation mark, or 2 or 3 after the mouth symbol, thus: $o!$ or $o!!$ or $o!!!$ and you get:

call, cry, shout, yell, roar, etc., and a \wedge caller, cryer, shouter, yellor, noisemaker, etc., etc.

Put a multiplication mark, or two, thus: xo or thus: xxo and one or two of the aforementioned indicators to the mouth symbol, and you get multiplied (enlarged) meanings like:

multiloquence, tirade, exhortation, harangue, verbosity, verbiage, rattle, long-winded, etc.

Put one division mark : or 2: or 3: before the mouth symbol, and you get the meanings of parts, and parts of parts of a speech:

paragraph, sentence, word, syllable, letter.

Put the indicator for "opposite meaning" before many symbols in this book, and you get the many opposite meanings like:

speech-silence, talkative-taciturn, in short, the antonyms to the synonyms.

And this brings us to the main advice:

Use with this book and this dictionary index also a book on synonyms and antonyms, preferably Roget's Thesaurus (meaning treasury).

When you can't find a word in this list, look it up in the Thesaurus and find the similar meanings which are listed here. Then look up the corresponding symbol. Most of the words mentioned above are listed in Roget's Thesaurus under the group heading SPEECH. But semantically adjacent groups of words are listed under the headings VOICE, CONVERSATION, INFORMATION, LOQUACITY, etc., and also the antonym groups of words under the headings SILENCE, TACITURNITY, DUMBNESS, etc.

Your frustration may vanish and exhilaration may take its place, the joy of discovery that so many words in English, and in other languages, can be expressed by one or two basic symbols.

Then the incompleteness of this dictionary will vanish too. Instead, any missing word will be a challenge for you to compose logically its symbol from the existing symbols in this book. For instance, the symbol for picture is listed, but how to symbolize to depict? Simply by putting the action (verb) indicator on top. How to symbolize pictorialisation? By putting the big action (verbal noun) indicator in front. But is this long word necessary? No!

All you need is the study of the basic chapters in which all the word and grammar simplifications mentioned before are explained. These chapters form one section only in this book of over 850 pages. They are found in Book II, The System of Semantography, and they begin on the following pages:

224, 236, 243, 245, 247, 250, 258, 260, 263, 269,
273, 282, 285, 288, 289, 290, 291, 303, 307, 310,
315, 317, 320, 323, 326, 328, 329, 343, 353, 354,
375

Once you know about all this, you won't need most grammatical niceties. The order of the symbols in a sentence tells the story.

F O L L O W T H E S E F E W R U L E S .

1. Read the explanation on page 7 about the double page numbers, the old (in brackets) of the first edition, the new page numbers of this second enlarged edition. All page references in this index refer to the new page numbers. All page references within the text of the first edition (marked by double page numbers in the upper corner) refer to the old page numbers in brackets.

2. Read the introduction on page 120 to the symbol summary. It will help you not to get discouraged if you cannot read the meaning of the symbols "right away" and without an explanation. Everything must be explained at first.

3. If you are a beginner don't study the summary of symbols on the pages 120 - 138. No explanation is given there about the evolution, derivation and combination of the most important basic symbol elements. These explanations are given in the special chapters. They can be found by following rule 4.

4. Where three and more page references are given in the following list, those referring to the special chapters are underlined. Look these up first. Other page references show special applications

in special fields. The references to page 120 - 138 lead you to the comprehensive summary of the most important symbols. This summary is made to help the advanced student.

5. A few symbols have been slightly changed during the three years of working and typing on the manuscript. Somewhere this change is mentioned and explained. Nevertheless, both versions are acceptable, the one or the other preferable in special combinations, as shown in the page references.

6. Read "The Story of this Manuscript" on page 65, and realize all the difficulties which I and Claire had to face. Kindly excuse all the shortcomings of the typewritten pages, with all the inserted corrections, and with all the mistakes not corrected.

7. Kindly excuse also all the shortcomings of this "dictionary index". When I drew my symbols during 1946 - 1949, I put underneath the symbols whatever explanatory word came into my mind, using often different words (synonyms) for the same symbol. It was my intention to work out later a proper dictionary. Now faced with all the shortcomings, I have given up in despair all my attempts of bringing order into this verbal disorder. Were it not for the patient labour of my good typist Mrs. Violet May Goodwin, this incomplete index would never have been compiled. I give my thanks to her.

8. Please help improving this index and this book, by using the empty pages at the end of the book which are provided for your notes, corrections, and suggestions for later editions. Thus you will become a pioneer for this idea for the linguistic unification of the human race. But there is a more immediate and practical reward for you in this study, and the following paragraphs will tell you about it.

HERE IS AN UNUSUAL NEW TOOL FOR
LEARNING ANY FOREIGN LANGUAGE

Read the chapter with this heading in the first promotion brochure reprinted in this book on page 25. Once you have learned the great simplification in words and grammar which can be accomplished with the basic symbols in your own language, you will realize the possibility of a similar simplification - by way of the symbols - in the foreign language you want to acquire. You will see the possibility of compiling a set of the most commonly used words in the foreign language, which words correspond closely - by way of symbols - with the most commonly used words in your mother tongue (underlined in the aforementioned word clusters symbolized by the mouth symbol).

Moreover, the greatest difficulties which a learner of foreign languages faces, are the many idiomatic expressions in any language, which are non-sensical when translated into the mother tongue of the learner (and vice versa). Our symbols give us a clear and simple method to overcome this greatest hurdle. This is explained in the aforementioned chapter on page 25, and in various chapters in the book.

The laborious learning of languages, as practised for centuries to this very day in all schools of the world, may give way to a new language learning without tears, speedy, efficient, and exhilarating. The symbols which have helped you in your mother tongue, will help

you with one foreign language, then with another, and another - all linked together by the very same pictorial symbols.

James L. Evans, Ph.D., Vice President of Teaching Machines, Inc., and a pioneer in new teaching methods, is already conducting a research program in using the basic symbols for the teaching of English and any other languages.

And this brings us to another great advantage of this idea.

THE SYMBOL BRIDGE TO THE GREAT
INTERNATIONAL SPOKEN AND WRITTEN
LANGUAGE OF MANKIND

We don't need Esperanto, Interlingua, Interglossa, and the rest. We have already a spoken international language, and the symbols in this book are built up on the basis of that great international spoken language. That international language is already the mother tongue of hundreds of millions of people. It is the international language of communication among the billion of people in Asia and Africa, divided by thousands of idioms. It is virtually the international language of science, technology, and commerce. It is taught in all the high schools and universities of all the countries of the world, including the schools of all those countries which are shut off by all sorts of Anti-Anglo-American curtains, walls, barbed wires, watch towers and landmines. Their tyrants cry against Anglo-American supremacy, but they let the children learn that supreme international language: English, or Anglo-American as it is called.

Now we have simple symbols to give all people a bridge from their own language to that great international language English. A day will come when pictures in illustrated magazines will carry underneath the caption a subcaption in our pictorial symbols. Children and adults all over the world like to look at pictures in magazines. They strain their brain to comprehend the English words which explain the pictures. Now they can learn to read the subcaption in their own language - and pick up the corresponding words in English. What a different way to learn English, so different from the hated way of the school. Look up page 486 in this book and see such samples of magazine pictures with pictorial symbols.

Look up page 39 and see that the same idea can be used in international index cards of short reports (abstracts) in all sciences, printed in English, and the symbols. This is a dire necessity in scientific research where the findings are published in too many journals printed in too many languages. Even the richest university cannot subscribe to them all, and who should translate them all? Index cards in English and the symbols are the answer.

Thus our symbols can bring about the one great international language for all mankind. But there is even a greater advantage in our symbols.

THE GREATEST ADVANTAGE

No language textbook, and no language teaching method can give us this great advantage. The logic and semantics of our symbols can make everyone learn to recognize which words have a definite meaning, against those words which are vague, ambiguous, false or meaningless. These are the catastrophic words which cause untold catastrophes, because they are used by demagogues and dictators in the governments, and even by the demagogues and dictators in many homes, where a dominating father or mother, or cheeky children can make hell of family life. The demagogues and dictators in the government make real hell for whole populations and disturb and destroy the peace in the world.

My friends! Realize the great possibilities in this new tool for overcoming misunderstanding and non-understanding, for overcoming demagogues and dictators in any language and in any country. Read the chapters on ethics (p. 45, 677, 809) and realize that this new tool can give us a new understanding of our purpose and destiny on earth. What is this purpose and this destiny?

In the gathering galaxies, in the harmonies of planets, in the evolution of living atoms which form organs and organisms in which all cells work together for the common good, we see the ultimate purpose of the power which pervades this universe: it is the ethical drive to create order out of disorder, harmony out of disharmony.

This tool for co-operation and understanding of the human race could help us to become one great community of citizens of this our world, working in the same way as the cells in all our bodies do for the common good.

Let us then use this dictionary index with determination.

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All books and articles quoted are listed with their titles in the Bibliography on pp. 77 - 80, together with the names of their authors and publishers.

The names of all publishers are listed together in this index under PUBLISHERS.

For the list of titles and contents of chapters see the following:

SHORT OUTLINE OF CONTENTS on p. 7.

CONTENTS OF CHAPTERS of the first edition pp. 67 - 76.

CATALOG OF THE SEMANTOGRAPHY SERIES, a detailed list of the titles of all issues pp. 796 - 808. A few issues are reprinted in full on pp. 16 - 59.

Some chapters have special titles to attract the interest of the reader. Listing the words of such and other titles as special entries, would make this index unwieldy and complex. Therefore, only words have been listed which are relevant to the content of every chapter in order to enable the reader to find it without going through the detailed list of chapters pp. 67 - 76. This refers also to the relevant content of the issues of the semantography series, which are listed summarily only.

A little searching may be necessary, as it is with all book indexes. A study of the arrangement of this index, and the detailed lists mentioned above, will help.

If you cannot find what you are looking for, please try the DICTIONARY INDEX OF SYMBOLIZED MEANINGS pp. 827 - 867.

All page numbers in this index refer to the new page numbers of this second edition, printed in bold type in the upper corners of every page. Please, disregard the page numbers of the first edition printed in smaller type and in brackets below the new page numbers. Why they had to be retained is explained on p. 7.

You, dear reader, are asked to understand all difficulties, and to forgive all mistakes. The blank pages at the end are reserved for your corrections and suggestions to be incorporated in later editions. Read my thanks to you on p. 6.

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READER'S NOTES

Please use this, and the following empty pages, for your corrections and suggestions to be incorporated into later editions. And thanks for all your constructive interest and co-operative work.

