Please note that these pages are typed without a draft. Kindly excuse all the shortcomings.

SEMANTOGRAPHY, THE NEW MEDIUM OF TECHNOLOGY.

A Lunch-Hour Address

to be given to

The Society of Students of the
New South Wales University of Technology

on Thursday, 23rd August, 1951

by C.K.Bliss, Author of "Semantography"

Mr. Chairman, Ladies and Gentlemen,

We are living in a troublesome world. Wars and the shadows of a coming third world war are constantly with us, and the people in all the countries are discussing the reasons and remedies for this most unhappy state of affairs. There are many factors which contribute to the general unrest in the world and one factor which is often cited is, that people of some nations have all the good things of life, and people in the backward areas have next to nothing.

I remember when I was a young chemical engineer that a new word came up TECHNOCRACY. Behind this word was the belief that the engineers of the world can bring the good things of life to all the people of the world. I still believe in this, because the people need little to be content. Enough water to grow food, enough food to fill the belly, and a roof over the family. I do not need to stress here the importance of water, for the happiness of life. There is a wonderful song, which I hear quite often on the radio and which grips my heart. It is about nothing else but water, and it is an Australian song. We all know, that the waters are sinking down, through sand and porous stone, leaving deserts in Australia, in Asia in Africa and even in the United States of America. And we know too, that it can be lifted and gathered, and deserts can be changed into green pastures.

It would therefore seem the simplest thing to bring technical development to the backward areas of the world - if sufficient money is provided. Yet, scientists of the British Colonial Office have found in Africa that primitive natives are engulfed in all kind of superstition, and resist even the introduction of technical and agricultural improvements.

These scientists have found out the remedy. Strange as it seems, they say that the fundamental basis for improvements of living is to teach the people to read and write. Make a man literate, teach him to perform the magical miracle to write a letter or to read a book, and you will lift him into a higher sphere.

If this is the solution, it should be simple to teach all the people in the world to read and write. Yet, the problem is almost insurmountable, because, the primitive people are divided by thousands of dialects and languages. In New Guinea for instance, a population of just 1,000,000 people speak over 100 languages (not dialects). Even adjacent villages may have different languages.

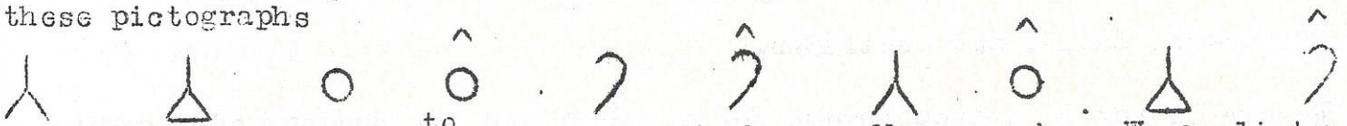
If the Governments would provide primers and books for each linguistic stock, the division would be even more accentuated, because now 2 adjacent villages would have 2 different phonetic scripts. Even if a perfect

phonetic spelling would be introduced with each primer, 20 ~~years hence~~ pronunciation would have shifted and the alphabetic letters would not ~~more~~ represent the exact sounds for which they have been intended.

This is the problem. In consequence thereof, scholars who think about the possibilities of a world government and world peace are unanimous that the first step to a world federation of governments is the establishment of universal literacy. A terrific task, if you consider that ¾ of the world population, that is 3 out of 4 human beings, cannot read and write.

Will you please realise that the word "universal", in the words "universal literacy" means only that all the people in the world should know how to read and write. These 2 words take into account the fact that all the literates would be still divided by the many languages. All the hopes which have been connected with Esperanto, Basic English, etc. have failed. The peoples of this planet stick to their many and varied Mother-tongues, even in the most literate countries like the United States, Canada and Australia where parts of the population speak almost exclusively, French, Italian or German etc.

Semantography gives the meaning of Universal Literacy a new, fascinating and unheard-of sense. At the simplest level, Semantography is a picture writing, and consequently it can be read and understood in all the languages of the world. People need not learn a single new or strange word. Look at these pictographs



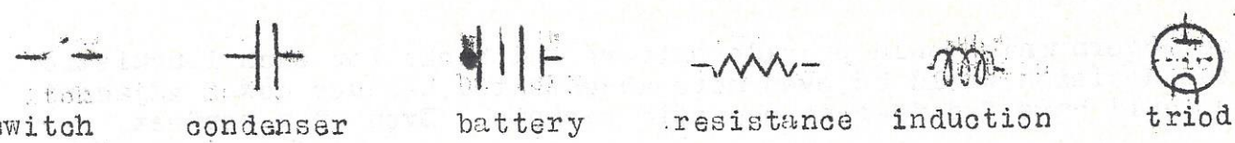
These symbols have another advantage, which is to be found in the semantic aspect of Semantography. Semantics is formed from the Greek word Semanticos, significant meaning, and consequently Semantics stands for the theory and study of the meaning of words. Now, just think of these words, American, Russian, British, Asiatic, ... Roman Catholic, Protestant, Jew, Moslem, etc. etc. Every one of these words is fraud with terrific and terrifying emotional prejudices. But the symbols above, showing the outline of an upright human being standing on his legs, do not contain any of these prejudices.

Let us try to write down the semantographic formula, which should contain all meaning elements which are to be found in all and every human being in a country or a nation. What do we find? One language? No! One faith? No! One race (whatever this means)? Again, No! We find only male and female specimens of the biological species Man, and the Earth they tread.

Placing the human symbol on the earths line, makes the difference between the male and female symbol disappear. Our new symbol stands for a human being on this planet, regardless of sex, race, faith, language, nation, etc, etc. - a Citizen of One World. Will you please realise the great advantage of this symbol for the peoples of the world.

Still, many of you might not be convinced that such a pictorial, universal language would ever come about. Now, here is the proof - and I have seen it myself in operation. The amazing invention of radio has brought radio receivers to all parts of the world. Consequently, you will find radio repair men in Java, in the Philippines, in China and elsewhere. And these radio repair men speak only their Mother-tongue, and consequently, cannot read the directions of American or European radio manufacturers.

But the radio engineers have invented a pictorial universal writing, which can be read and understood in all languages. Here are a few examples



I lived for 6 years in Shanghai, and I remember vividly when I had to go with my radio receiver to a radio repair shop. I couldn't speak Chinese, but we got on beautifully, because I wrote down the radio symbols to indicate what I wanted to have changed, and the Chinese understood me perfectly.

Now, you will realise where I got the idea of Semantography. China has an ideographic and pictographic writing and people from different parts of the country could write letters to each other, could "converse" in writing in the shop or the hotel and could read the same newspaper and the same book.

And here is another proof for a prophetic statement made by the late Professor Basil Hall Chamberlain. He wrote in 1904:

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

We all realise that mutual understanding between the peoples is today a matter of life and death. On the highways of the world, where motorists and pedestrians are killed daily by the thousands - warning signs, written in the native languages are taken down and replaced by international pictographic symbols, which can be read and understood in all languages, and grasped quickly, even by an intoxicated driver. Instead of the ambiguous word CURVE, we have now a bent arrow. And here below are a few symbols of Semantography for such road signs.

CURVE | hammer (pick) | MEN AT WORK | ROAD UNDER REPAIR

As you see, the hammer points directly at the interruption of the road. The idea is, that the words in the native languages should always be printed underneath the symbols, so that the people of the particular country would learn to understand the symbols.

Semantography for New Australians.

Such symbols could be of direct use in Australian factories where today a great number of immigrants are employed, who speak different languages. There are certain warning signs, which must be understood in any language. Here are a few examples.

door | ENTRANCE | EXIT | fire | FIRE-EXIT | FIRE STAIRS

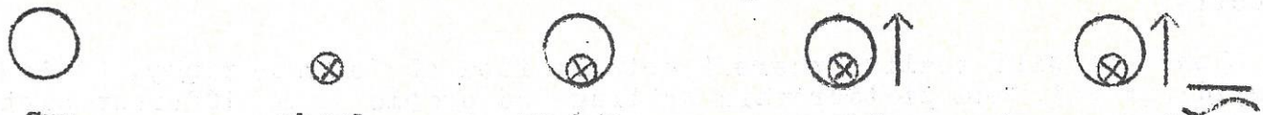
These symbols can be adopted right away for public buildings, cinemas, theatres, etc. etc. I believe that these Semantographic symbols will be the first to be adopted.

Semantography for Water Irrigation Work.

My time is very limited and I can show you only a few symbols. In this written extract I shall not show symbols which I am going to show with projection slides. These slides show photographs of pages of my work on SEMANTOGRAPHY. You can find the 3 volumes of my work in the Public Library, in the Municipal Library, and I hope that the library of the University of Technology will acquire the work too. Now, here below are a few symbols, which should prove their practicability for irrigation work in backward areas, where people may not even have the words yet for certain technical expressions.

water | rain | evaporation | stream | water below ground | lifting water from below | artesian well

Naturally, symbols for general meanings, for instance "machine" must be constructed in a simple manner. I did this in the following way. I use the symbol for the sun, which indeed provides us with all the energy, and combined this symbol with the symbol for the wheel. No better symbol could be found for technological machinery than the wheel. In combination, both circles look like two excentre wheels, a significant part of many a machine. The symbol for machine and the arrow up, should indicate therefore a machine which lifts up anything. And in the next symbol, we see what is to be lifted up - water below the ground.



Sun (source of energy) | wheel | machine apparatus | machine for lifting | pumping machine

Now here are a few other symbols, which could be readily adopted and used on sketches, drawings, directions, and on the machinery itself.

pipe | to pipe | tap | water tap | flowing ON | stopped OFF

Semantography for Engineering Tables.

Every engineer uses extensively engineering tables contained in big books. They are one of the most important tools of the engineer. On page 386 of Book II, I have shown a number of such engineering tables. As you know, 95% of the contents of such tables are already written in the international symbols of mathematics, geometry, chemistry, physics, electrical technology, etc. etc. Actually, only the few lines on top of the table, and some headings in the various columns are printed in ordinary phonetic writing. We could print under each line the "translation" in the symbols of Semantography. A book of such tables, printed in England or America would contain the first line in English, the second line in the symbols. The same book printed in France would contain the first line in French, and the second line in the symbols. Thus, anyone who understands English or French would read the table in this language, and will not bother about the symbols. But, an engineer, or an assistant, who understands only his native African or Asian language, will gladly learn the meaning of the symbols, in order to be able to read the table in his own language.

The Symbol for Engineer.

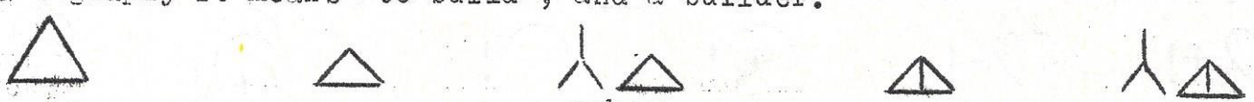
I am now going to develop the symbol for engineer. He applies science to our needs. Consequently, we must first develop the symbol for science. A scientist is a man whose mind contemplates rationally the aspects of nature. Under the word Nature, we understand this universe of ours, with our earth and the starry sky. We call this also Creation. And people throughout the times have believed that this Creation was created by a Supreme Intelligence, which has been called Creator, God. During the last 80 years a new creed has arisen, according to which the world and all living organisms are the product of chaotic chance only. This creed has collapsed, and modern physicists, biologists and other scientists, finding harmony in the working of the atoms and the chromosomes, say rather apologetically that "God is a Mathematician".

It is of course, impossible to find any adequate pictorial symbol for Nature and Creation. I have therefore, chosen an age-old symbol, which has been displayed for thousands of years in places of worship of various religions: An eye inside an equal-sided triangle. This should indicate the all-seeing Creator, and the equal-sided triangle, being the most simple and most harmonious geometrical configuration, should indicate the divine harmony of space relations. If we leave the eye out, we get the meaning of nature. Adding the symbol of the mind (outline of skull) we get the meaning of: Mind contemplating Nature, and the man doing this is a scientist.

Creator | Nature | mind (skull outline) | mind contemplating Nature | Philosopher Scientist

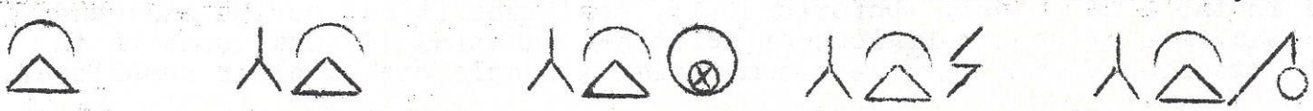
A scientist is therefore a philosopher who contemplates nature in all its aspects, and tries to find the "natural laws", according to which this universe is run.

The engineer applies the knowledge gained by the scientist. But, he is more than just a thinker and student. He is a kind of creator himself, in so far that he is creating new things, new chemicals, new machineries and wonderfully working apparatuses, which have never existed on this earth, and indeed may be very rare in the whole universe. Consequently, our symbol for engineer must contain the symbol for creation - but, it is a man-made creation on a smaller scale. Consequently, we shall draw a triangle of smaller height. This should mean "man-made". With the symbol for man we get the meaning of "maker", a maker of anything. If we draw a small vertical line, within our triangle, we get the outline of a triangular tool used by masons and builders. Indeed, it is their symbol. And in Semantography it means "to build", and a builder.



Creation | man-made | maker manufacturer | to build | builder

But an engineer is more than a maker and a builder. His mind contemplates his creation, even before it takes shape. In thinking of his creation, he becomes a planner, a designer. If we now add the symbol for "machine," developed on page 4, which means any apparatus in which energy is used, we get the meaning of a technological planner and designer, an "Engineer". We can then symbolise special engineers, for instance, an electrical engineer (lightning symbol) or chemical engineer (retort symbol).



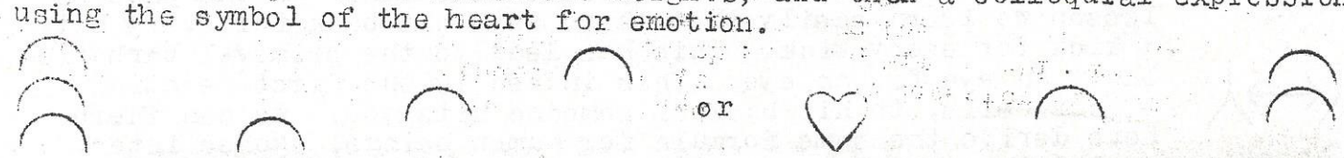
plan design | planner designer | engineer | electrical engineer | chemical engineer

As you see, the symbols are developed in a logical way, they are simple and if you compared the length of the words, if written in type of the same height, like ELECTRICAL ENGINEER (but the capitals as high as the symbols) you will realise that that the symbols take up much less space than the phonetic alphabetical symbols.

The Symbolisation of Controversial Meanings.

I have worked on Semantography for 9 years. And during this work, I had to face much criticism. "Oh, yes," said my critics, "we grant you that you will be able to picture pictorial things. But your idea is hopeless for the symbolisation of controversial meanings, like Right and Wrong, or for that, Capitalism and Socialism, etc. etc." For a number of years, I thought that my critics were right, and I realised that meanings like that are "highly inflammable", even "explosive". On the other hand, I am a chemist and we chemists have developed a chemical semantography, to deal with very complicated matters. To do this we analyse a meaning into its elements, and then build up the formula with these elements. I have done just this, and here below, I shall now show the analysis for the formula of the meanings Right and Wrong.

These meanings refer to EVALUATIONS of our mind. Our mind can be roughly divided into 3 sections, and brain surgeons have indeed performed most amazing operations. These 3 sections are popularly called (1) Emotions, (2) Reason, (3) Conscience. Sigmund Freud said that "We don't live our lives. It lives us. We are lived by unknown forces." He named the first brain section IT, which in Latin reads ID. In the following symbols you see the Mind symbol on different heights, and then a colloquial expression using the symbol of the heart for emotion.



whole mind | emotion ID | reason EGO | conscience SUPER-EGO | or | emotion ID | reason EGO | conscience SUPER-EGO

(these are better symbols)

Now, to the symbols of Yes and No, Approval and Disapproval. If somebody answers a question with No, his answer is negative. If he is positive with regard to his answer, he says Yes, consequently, we use the plus and minus sign with an exclamation mark to indicate Yes or No. If we put in front of these symbols the symbol of the mouth (a small circle) we get the meaning of speech, saying, and in connection with yes and no, we get approval and disapproval (by voice only, not by thought)

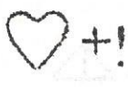

yes

no

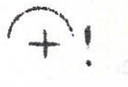

approval

disapproval

We now combine the symbol for yes and no with the symbol for emotion (the heart). We get the meaning of like and dislike. Connected with the symbol of the reasoning mind, we get the meaning of good and bad in rational thought. Indeed, we may dislike a man from purely emotional motives, but we may declare his work and attitude good from rational motives.


like


dislike
emotional


good


bad
rational

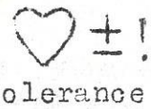

good
right

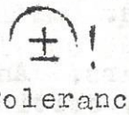

bad
wrong
moral

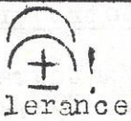
Now, look at the symbol for conscience. You see clearly, another mind, a higher mind, superimposed upon your mind. Sigmund Freud said that this indicates the mind of father, mother or the people in authority (teacher, minister, etc.). Another great psychologist, once a co-worker of Freud, Gustav Jung, said that "God is our Father" and that the Super-Ego in each mind is the Mind of God. Unfortunately, sometimes it may be the mind and the teachings of some religious or political fanatic. Indeed, some of the most atrocious crimes have been committed by people with a clear conscience.

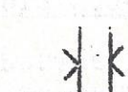
The meaning of Tolerance.

Hendrik Willem van Loon found a wonderful definition for the meaning of tolerance. He said it this way: "If you think that you are absolutely right about something, and the other fellow is absolutely wrong, and if a feeling creeps into you that the other fellow may perhaps be a little right, and you perhaps a little wrong, then you have the feeling of tolerance." We can symbolise this very simply, by putting the plus and minus symbol together. And when we do this, we get the meaning of tolerance in engineering.


Tolerance
emotional


Tolerance
rational


Tolerance
moral


Tolerance in
engineering

If an engineer orders a steel shaft, of exactly 25 mm diameter, he knows that the turners are human beings, and far from perfect. He must be tolerant, and he defines his tolerance in exact figures: plus - minus 0.1 mm.

Natural Laws and Ethical Laws.

Only a few words here shall indicate the contents of a number of chapters in Book III of Semantography.


Newton's
Law

This symbol formula indicates Newton's Law of Interaction. The squares indicate 2 material bodies. I have chosen the square to indicate that matter is build up according to geometrical harmonious laws. The double-headed arrow indicates action and reaction according to Newton's formulation: For every force in nature there must be 2 bodies. For every action there is an equal and opposite reaction. In the physics lesson we learn easily that there is a hit back for every hit, a kick for every kick. This has lead to the primeval barbaric law: An eye for an eye. This indeed is the first reaction of your cells, to hit back if someone hits you. We can therefore derive the same formula for human beings. Moses interpreted this law by saying "Thou shalt not kill" (because it may precipitate blood vengeance and another kill.) And Jesus formulated this law of interaction saying: "Whatsoever ye would that men should do to you, do ye even so to them". Indeed, Jesus advice, to give your enemy a good turn, is so far the only practical advice to turn an enemy into a friend by action and reaction.


Moses'
and Jesus'
Law