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C.F.B

Semantography Series No. 356

MARGARET MEAD PROPOSES IN ALL SERIOUSNESS
THAT MANKIND SHOULD LEARN THE ARMENIAN
LANGUAGE AS THE BEST INTERNATIONAL LANGUAGE
THERE IS.

An article which appeared in "Natural History" Journal of the American Museum of Natural History Vol LXXVII, No. 7 of August-September, 1968.

As co-author is named Rudolf Modley

Title of Article: COMMUNICATION AMONG ALL PEOPLE EVERYWHERE

Subtitle: The authors propose the adoption of worldwide secondary spoken and written languages, and a system of signs that will be universally understood.

Bliss' enraged introduction: Margaret Mead and Rudolf Modley have given me many sleepless nights and many harrowing days. Today, when typing this introduction (January 7, 1972) more than three years later, my unhappiness has not abated. It has increased, because the inaccuracies (to put it mildly) in this article and in many letters and publications about my work are good enough to drive any pioneer of a new work into an untimely death as it has happened with most pioneers. I am now in my 75th year, and I have a sense of humour. Moreover, I am a fighter, and I have fought my way out of the concentration camps. I have fought professors and large firms in the patent courts of Europe and even Australia and I have won. I am fighting that woman, beloved by the editors of all women magazines, because she is the Pontifex Regina on all matters concerning Sex in Samoa, Samaria, Somaliland and Somewhereelse. She had the temerity to propose to a Senate Committee investigating the ravages of drugs that marijuana should be legalised, though all medical men agree that it is the first step to harder drugs. She had the temerity to affront all American parents by telling them that they should "learn" from their hippie youngsters and gangsters how to run the world. I, who had a university degree in chemistry, I, who has made an important discovery in biochemistry, I have to be told by that woman in an article which appeared just 7 days ago in the Sydney Morning Herald, as a reprint from the Chicago "Sun-Times" that:

"There is a lot of unrest between the sexes and confusion among scientists who have tried to explain femininity and masculinity in terms of bodily chemistry. Nonsense, says Dr. Mead, anatomy and not chemistry is what counts."

So, chemistry doesn't count. Mighty Margaret, blessed ignoramus in chemistry. Don't you know what happens when a man takes estrogen pills, the female hormone? His breasts begin to swell, his voice gets a high female pitch tone, and other symptoms appear - all anatomy of course, according to M.M.

And speaking of female breasts, in an article in the Los Angeles Times of March 29, 1970 about symbols you are quoted as saying with regard to a good symbol for a female human being: "the only way to positively identify a woman all over the world is a figure with breasts." Very good, wonderful, especially in these days where young men wear goldilocks down their shoulders. Let's demand that policemen anywhere have the right to enforce the opening of shirts and blouses to detect whatever is there to detect, if they suspect something fishy going on.

But what symbols should be put on the doors of toilets for MEN and for WOMEN? If we follow Mighty Margaret Mead and put breasts on women's toilets - what should we paint on the doors of men's toilets? According to anatomy it must be a penis.

And speaking of symbols, who invented the use of the term Glyph for interlinguistic symbols which can be read in all languages? You Mightly Margaret, blessed ignoramus in Archeology, Egyptology and the Greek Language to boot. First glyphein means in Greek to carve. Graphein means to write. Hence telegraphs never carve, they write, as otherwise we would say Teleglyph.

When you Margaret wrote a scientific monograph you wrote it, you did not carve it, as otherwise it would be a Monoglyph. Do you give Autographs or Autoglyphs to gushing youngsters? Should the many papers all over the world that are written, typed and printed be renamed the SUNDAY TELEGLYPH, or the DAILY TELEGLYPH?

But this is not the whole story. The real blunder is still to come. You took the term glyph from the term of hieroglyphics which means in Greek Sacred Carvings of the Egyptians of old. Well, hold on to your seat M.M.! The hieroglyphic carvings on Egyptian tombs show pictures alright, but they don't mean what they show. Does the picture of a lion really mean a lion? Does the picture of an eagle really mean an eagle? Not at all. Almost every carved picture denotes only a letter of the alphabet. A Lion stands only for the letter L, and for nothing else (in old Egyptian). An Eagle stands for the letter A and for nothing else.

If you don't believe me just look up the name of CLEOPATRA in my book Semantography p. 771, 2nd edition 1965. Everytime I remember that I have given you my book as a gift, I want to kick myself - and with a nice dedication to boot (another kick). Or if you don't believe me what I have written there, just ask an Egyptolog if you want to give him a good laugh for your ignorance.

The name of Cleopatra shows as the second carved picture a Lion to mean the letter L in Cleopatra. And the carved picture of an Eagle appears twice as the 6th and the 9th. But your supreme scientific authority is so great that ignoramuses all over the world have taken your falsehood term (born out of ignorance) as the truth, and they show off their great knowledge by talking about glyphs here and glyphs there. But you Margaret, you have to my knowledge not invented a single glyph, or graph or sign or symbol. You can only talk about them - expertly for sure.

Enough of my lament. I could fill more and more pages, and I will, if only I can find the time. Let's get back to your praise of Armenian, and let me cite what you and Modley have to say about me.

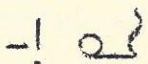
INACCURACIES ABOUT BLISS' WORK IN THE ARTICLE BY MARGARET MEAD AND RUDOLF MODLEY

The very first 4 symbols depicted, show the plus sign (+) and the question mark (?) both internationally used. But the 3rd and the 4th symbol are mine, all mine, the walking legs and the wavy line for water. But there is not a word in the description which says that these are MY symbols, invented by ME. I protest. The second 4 symbols show the meaning of NO SMOKING first in my symbols then in 3 other versions, showing a stylised cigarette crossed out, a burning match crossed out, and a trio of a cigarette, a pipe and a cigar crossed out. And here comes the shameful and shameless presentation of my symbols, a presentation which other "symbol seekers" have adopted too for misrepresenting and for deprecating my symbols. My symbols for NO SMOKING are composed of the symbol elements as follows



no! (negative + exclamation mark) mouth stick and flame (cigar or cigarette)

and altogether


 NO SMOKING

But Mead and Modley don't explain my symbol elements and how they compose to the meaning NO SMOKING. The reader is left to be amused by the seemingly idiotic and abstract complexity of my symbols.

My symbols are abstract say M.M. and J.M. This is simply not true. The symbols of the minus sign (-) and the exclamation mark (!) are abstract to some extent, but they are not my symbols. They are internationally used, and therefore I use them too. But my own symbols as shown above, the mouth, the stick, and the flame are pictorial, and nothing but PICTORIAL. Damn it! And here is what M.M. and J.M. say about my work. It's really not a "work" it is only an "attempt" and "abstract" too, as they say in the following words:

"Various prophetic forerunners of the future are beginning to experiment with such a language. Charles K. Bliss of Australia has made one of the most extensive attempts. An even less abstract attempt was reported recently by Jean Effel, a Paris newspaper correspondent."

False again. The few symbols invented by that journalist are shown in my Semantography Series No. 363 and the reader may judge for himself as he or she would find that Effel's attempt is abstract, and surely not "less abstract" than my symbols which are pictorial. Enough of it. Let's savour the article itself. But first about "The Authors" as every scientific journal has just such a column, and often with a picture of the author too. Well, judging from the pictures of M.M. in the journals and newspapers of the year 1968 when the article appeared, the photograph of M.M. must be at least 30 to 40 years old. But this is a female prerogative. Let's not whack her for that. Here we go.

ABOUT THE AUTHORS

(as stated in page 6 of the issue)

Cultural anthropologist, psychologist, writer, lecturer, and teacher - MARGARET MEAD, Curator of Ethnology, joined the American Museum staff in 1926. She has devoted many years to the study of the native peoples of the Pacific, and has lately turned her attention to the study of contemporary cultures and the further development of cultural theories of human behaviour. She has published a large body of books for students and laymen, as well as numerous scientific monographs and papers. Her essay, "Alternatives to War", appeared in NATURAL HISTORY'S special supplement on the anthropology of war (December, 1967). Next year Dr. Mead will become Chairman of the Social Sciences Division and Professor of Anthropology at Fordham University's new liberal arts college.

Born in Vienna, RUDOLF MODLEY was an early collaborator of Otto Neurath, who developed the pictograph method of analogical communication. He came to the United States to become Curator of Social Sciences at the Chicago Museum of Science and Industry. Dr. Modley established Pictorial Statistics, Inc. and Pictograph Corporation, and is co-chairman with Margaret Mead of Glyphs Inc., an organisation for the development of universal graphic symbols. Among other works, he has published "How to Use Pictorial Statistics" and "The Challenge of Symbolology".

One last parting shot at Modley. He knew of my work for 10 years without ever contacting me, and when he wrote and published about symbols during that time he never mentioned my work in the Bibliographies which accompany every such scientific article. Unfair, I cry. Only when he contacted me at last, and when I argued with him wildly and mercilessly, did he say something about my work, BUT AGAIN, AS SHOWN IN THIS ARTICLE, HE DELIBERATELY DID NOT SAY A WORD ABOUT THE COMBINATION OF MY SYMBOL ELEMENTS, LEAVING THE READER TO ASSUME THAT I MUST BE A CRANKY CRACKPOT OR AN ABSTRACT ASS. UNFAIR, I CRY, UNFAIR, I SHOUT, UNFAIR, I ROAR.

And here is the text of the article. However, I cannot depict here the conventional pictures of conventional signs, unless I spend much money of having all pages photographed. Too much expense and too much honour. Here we go.

COMMUNICATION AND PEOPLE EVERYWHERE

While preserving man's wealth of languages, we can achieve worldwide communication by adopting two languages and a system of signs that will be universally understood.

Long before modern technology brought the peoples of the world within speaking distance of each other, prophets and philosophers had begun to think about the possibilities of universal languages that would remove the dangers symbolised by the story of the Tower of Babel. In the Western world, there have been serious attempts to invent new languages based on European grammatical forms. It was hoped that these languages would do what Latin once did for the tiny literate medieval European community and what diplomatic French did for the nineteenth-century political community. Esperanto was the language most vigorously pursued by idealistic enthusiasts. Interlingua, a written scientific language, is a current attempt to provide those of us whose languages are Indo-European with better forms of communication.

Since foresighted individuals first began thinking about these problems, however, the world has changed. While new technologies have made former dreams obsolete in detail, they are still relevant to the world's needs. Today we have to deal with new and demanding conditions. Anyone on this planet can travel to any part of it in 36 hours. But the people of the earth speak some 2,800 languages, and it would be impossible to provide enough interpreters at airports to aid these potential travelers. Even the simultaneous arrival at an airport of aircraft from a variety of countries, whose pilots speak only their own languages, occasionally causes difficulty at control towers.

These conditions present a challenge to the inventiveness of the modern world.

To people who cannot travel, get on and off trains, ships and airplanes, or find an inn because of language barriers, the new freedom of movement is meaningless.

The Instantaneous Message.

A first requirement then, for our technologically developed world is a set of clear, unambiguous signs that can be understood by the speakers of any language, and by the members of any culture, however primitive. These symbols will enable mankind to use the great new freedom of worldwide travel. Without them, hungry, frightened, confused people will continue to clog the travel lanes, come to grief on the roads, return disenchanted to their small provincial worlds, and contribute to the isolation and hostility in which many human communities live today.

Such signs are necessary for all travelers - for the boy riding a bicycle as

well as for the motorist in a large city. We call these signs glyphs.

Glyphs are the only universal graphic communications device that is in public use. They are beginning to appear on highways, in world's fairs, at hotels and inns, and on machines and appliances the world over.

Glyphs communicate visually. Their message provokes "visual thinking" instead of "verbal thinking". Visual thinking has a direct and immediate impact on the viewer: a picture of a horse is an image of a horse to all men. No further interpretation is required. Verbal thinking, on the other hand, requires a more complex process. The word horse, or cheval (French), or Pferd (German) has to be heard or read first, and only then (if he can speak or write the specific language) can the intended recipient of the message interpret the meaning.

The advantages of a glyph are thus twofold:

1. Glyphs don't require knowledge of a language, spoken or written. The message of a glyph is unambiguous, simple, and understandable to anybody who has once "learned it". An arrow pointing right means "turn right", two moving legs mean "go".
2. Glyphs create a direct and immediate impact and thus permit immediate response. This applies as well as to those who know a language as to those who do not. This immediacy of response saves thinking. What Alfred North Whitehead has said of mathematical notations applies also to glyphs: "By relieving the brain of all unnecessary work, a good notation sets it free to concentrate on more advanced problems."

Graphic symbols (of which glyphs are those selected for worldwide communication) can be image-related, concept-related, or arbitrary.

An image-related graphic symbol refers to the real object by resemblance in different degrees of "fidelity". A symbol for a cow would be an image-related symbol if it were to show a silhouette of a cow. Image related symbols have the great advantage of being easily recognised, easily learned, and easily retained. But it would be wrong to jump to the quick conclusion that such symbols are the ones we should always choose for glyphs. One trouble with image related symbols is that in these rapidly changing times the objects that the symbols represent change frequently with technical innovations, new packaging and fashion. An image related symbol of an automobile, created today, would look out of date a decade from now. The same is true of locomotives, clothing, airplanes, and of many products that require packaging.

Concept-related symbols tend to have a longer life-span. The horizontal wave symbol for water, the directional arrow, the vertical wavy symbol for smoke or fire are more representative of our idea of water, direction, or fire than of the actual visual image. Yet, the symbol will be clear to people of most cultures, and once learned, it will be easily retained and recognised.

Finally, we have arbitrary symbols, which have no visual relation to an image or a concept. Because of this, such symbols are more difficult to teach, more difficult to learn, and harder to retain and recognise.

The graphic symbols in current common use, such as letters and numerals, punctuation marks, and mathematical operators, are all arbitrary symbols. Some have developed over centuries, others over thousands of years, often after competition with others symbols. This is especially true of mathematical notations. Early in the year 1696, Gottfried Wilhelm Leibnitz, one of the major developers of mathematical notations, said in a letter: "As regards signs, I see it clearly that it is to the interest of the Republic of Letters and especially of students, that learned men should reach agreement on signs".

PICTURE TEXT:

Glyphs - universal graphic symbols - should be immediately understandable. A symbol that shows an object's image fills this need, but such symbols (the telephone, for example) may become badly outdated. Concept-related symbols - the bent arrow (turn right), walking legs (go), and wavy line (water) - are clear and timeless. The question mark and plus sign are arbitrary symbols and give no clue to their meanings.

This is what happens when several groups try to solve a problem in glyph creation. None of these symbols appears to have much chance of winning the race for a simple and meaningful glyph for "No Smoking".

- A. Blissymbolics
- B. International Committee for Breaking the Language Barrier
- C. Expo 67.
- D. International Air Transport Association

Motorists and pedestrians in Britain proved in a recent test that many do not know the meaning of road signs such as those above. Women demonstrated less recognition than men.

- E. No Entry
- F. No Passing
- G. All Motor Vehicles Prohibited.

What Leibnitz said almost 300 years ago is true today for other graphic symbols. Their advantages are so apparent and the need for them so pressing that they are popping up everywhere. Sets of proposed glyphs are being developed by different international bodies for highways, for railways, for airlines and airports, for machine tools, for hospitals, and for many other products and services. World's fairs and Olympics, too, often develop their own set of symbols to guide and inform visitors.

The result has been much experimentation, some progress, and a great deal of confusion. The creation of symbols by organisations with a limited scope of authority (airports, railways, or even a single hospital), causes waste and confusion and threatens us with chaos.

Some international bodies have taken action to channel the many efforts into co-ordinated thinking, research, and development. International design groups have set up a Commission on International Signs and Symbols which works with UNESCO, the International Standards Organisation, the International Chamber of Commerce, and others. Out of these efforts, a worldwide set of unambiguous and instant non-linguistic graphic symbols may emerge.

But we are still far from attaining this objective. How far is made apparent by a recent test of the road signs and symbols adopted in Britain. Motorists and pedestrians were separately tested on their ability to recognise "standard" road signs. Only about one third of all motorists tested could correctly identify a sign that prohibited all motor traffic: only two thirds could identify a sign that indicated "no passing". Many motorists obviously do not know the signs that directly affect their own safety. Pedestrians (those without a current driver's license) did even more poorly. Only 34 per cent could identify the "no entry" sign and only 18 per cent the sign prohibiting bicycles and motorbikes. The reason is apparently twofold: first, the so-called International Road Signs are very poor in concept and design (they are not in use in the United States), and second, an insufficient effort was made to "teach" the signs before they were introduced.

We can now see more clearly what is needed if the world is to have a set of glyphs that will help travel, trade, safety, and communication in general. We need co-ordinated research, development, and testing: broad private and public support for glyph development: a nationwide educational campaign as glyphs are introduced into any one country, and a permanent body of international and national experts to keep the international symbol system up to date, effective, and simple. Until we reach that time, all symbol systems currently in use should be thought of as only temporary and subject to replacement.

A Rich Second Language

While a universal series of glyphs permits anyone who has learned a very few symbolic devices to move about anywhere, safely, and find comfort and rest, the need for a spoken language, which will enable people from any part of the world to communicate with people from any other part, is of a different order. Here the hope is that we can in some way develop a language in which all the peoples of the earth can really talk with each other, not merely about the business of money, schedules, directions, and rules of the road - which are the problems that can be solved by glyphs - but about events, about politics and religion, about memories of the past and hopes for the future. We need a language that can be spoken to very young children, a language that can be spoken by a woman giving birth in a foreign hospital or by someone having an emergency operation in a strange country, a language in which a psychiatrist can speak to a disoriented foreign sailor, a language through which a professor can find out what is troubling a brilliant foreign graduate student who is doing badly. We need, indeed, a language that runs the gamut of human experience, that is redundant in the extreme because it allows for use by the stupid as well as the bright, by the child, the senile, and the disturbed, by the mother signing her child to sleep and the lover shyly importuning his beloved.

When the first idealists began making up new universal languages on a European base, the difference between a natural language and a carefully constructed, perfectly regular, "easier to learn" artificial language was not yet understood. People believed that one barrier to learning certain languages was that those languages were particularly hard to learn, another barrier was a chauvinistic preference for one language over another. The answer seemed to be to create, using some known set of more generalised grammatical rules, a new language which, its advocates admitted, people would have to learn to speak. But it was not then understood that a natural language differs from an artificial language in features that we do not at the present time have the skill to build into a new language: redundancies, for instance, of sound patterns, cadence, accent, and intonation which in a natural language developed over centuries of use by individuals of different levels of intelligence. Like a human culture - the complete repertoire

of learned human behaviour characteristic of a society - a language is based in the history of its predecessors. It has been changed through time by the unconscious and inarticulate behaviour of its speakers, and sometimes consciously and articulately by those who have attempted to write rules of grammar and spelling. Because it was shaped by all its users, by those who stammered and stuttered as well as by its orators, it can be learned by any human being who is completely exposed to it.

We know that children easily learn the language spoken around them, even if it seems difficult to the speakers of other languages. Whether adults are able to learn a language the way children do depends on what they have learned about learning languages, about the relative status of the language they speak and that of the language they wish to learn, and upon their intensity of their exposure to the language. Language learning is directly related to intensity of exposure, speaking a language seven hours a day produces learning at enormously greater rate than taking a lesson a day and then retreating into one's own language. Sometimes a situation arises where a child refuses to learn a second or third language, but this is a question of learning language learning symbolically, not a question of the extent to which any language can be learned by any human being, even one of quite low intelligence

PICTURE TEXT:

Regardless of their language backgrounds, the deaf can communicate through visual signs. Here uncrossing the fingers expresses "but".

After giving the female sign, the arms are cradled but not rocked - this means "daughter" rather than "baby".

A circular sweep of the right hand, after first positioning the hands for "advise", signifies the word "influence".

It is necessary to emphasise these facts in the United States because owing to the immigration situation in this country, children were taught to refuse to learn the language spoken by their immigrant parents. This in turn affected the language learning capacity of those whose ancestors had immigrated much earlier. The dogmatism of our methods of imparting American English - "this is a glass, the French word for glass is verre, the German word for glass is Glas, Spanish is vaso" - means that we do not teach children that such nouns are simply the way in which speakers of a particular language refer to phenomena in the outer world for which other peoples have equally "correct" other names. We teach laborious point for point translation, not a total interrelated system. We have only to compare the difficulty we have in teaching languages in American schools with the ease with which children who are expected to do so learn other languages - as in the Netherlands, for example - to realise that the expectations of teachers, parents, and peers set up conditions of learning or non-learning. We then mistake results produced under these conditions for measures of individual capacity to "learn languages" or for measures of the relative difficulty of particular languages.

If we have to have a global language that all can learn if they wish to communicate with people who speak another language, it must be a natural language, a language that has been spoken for centuries. It must not be presented as a language that will supplant one's mother tongue, but as a second language, to be learned by those who speak different languages, so that they can speak to each other.

Anthropologists and other social scientists, linguists, communication specialists, and educators concerned with teaching languages are all beginning to contribute to the discussion of a worldwide language. It was Professor Sol Tax, editor of the international journal *Current Anthropology*, who recognised several years ago that the time was ripe to propose working on the question: we knew enough about the nature of language, about how languages were learned and could be taught, and we had the necessary technical equipment - today enormously refined in electronic recordings and language laboratories. At a conference of experts called by the Association for a World Language (now the Council on International Communications. Inc.) in 1965, it was furthermore recognised that the time was not only ripe, but that we had reached one of those moments in history where action was imperative or the chance could pass us by. Telestar and its successor communications satellites are the critical inventions that make it deeply desirable that people all over the world be able to receive the same spoken message. The beginning of telecasting in one language would provide a real reason for peoples everywhere to learn it. But technology will not wait. Already there are inventions that will enable simultaneous broadcasting in five different languages. Once put into practice there will be a great investment in hardware for multilanguage broadcasting, bringing into play the linguistic chauvinism and imperialism of the speakers of the great languages.

Today, most speakers of English, either as a first or second language, are

hotly in favour of English as a worldwide second language. There are two main objections however, one deep and the other expedient, to taking any great language for a world language. If one of the great languages begins to sweep the world, it will come into competition with other great languages, speakers of these will then attempt to wipe out all the smaller languages within their particular orbits in order to preserve and promote their own languages. Instead of 2,800 different languages, each distinctive and rich with meaning of those who speak it as their mother tongue, we will have a gradual acceptance of a foreign language by millions of speakers of less widely used languages. Human culture will be poorer, and millions of people will be condemned to a kind of secondary citizenship. Forced to function without a true mother tongue, they would risk hearing no lullabies as infants, writing no poetry in adolescence, engaging in no impassioned oratory as young people.

The expedient objection to adopting an existing great language as a world language is political. The non-European world will not, in the present climate of opinion, accept a European language as the second language of the world. This is, we believe, a completely valid objection to the adoption of English, French, Russian, Spanish, etc.

If we are to have a second language rapidly adopted on a world scale, what are its criteria? It should be a natural language. It should be a language that has been written for a long time so that difficulties of orthography have been at least partially solved. It should be easily transliterated into other scripts. It should not be a European language. It should not be the national language of an important political power, a choice that would induce inevitable political rivalry. It should be as slightly as possible identified with one religious or ideological position. There should be a large number of literate speakers who themselves are fluent in the principal languages of the world, so that they would be available as translators and teachers. Armenian, for example, is a language that meets these criteria.

It may be asked, why should we take a full-bodied, complicated, rich natural language as a second language to be spoken all over the world? Can we not instead adopt a lingua franca, or at least make whatever language we choose into a lingua franca. Studies of pidgin and creole languages suggest that we should not do so. It is true that those who have learned creole as a second language are in the position of what Alan Lomax has called "communication equity". In the same way, an English-speaking person using New Guinea pidgin to talk to a New Guinea native whose mother tongue is one of that country's some 700 different languages does face the New Guinean as an equal, and this can be accomplished in no other way. But the minute New Guinea peoples abandon their own languages and take up pidgin, as they tend to do, the equity vanishes. Pidgin or NeoMelanesian, then becomes the new but impoverished mother tongue of one group, and is therefore foreign to the other. Only a language that all speakers must learn with an equal expenditure of effort and which remains a second language - neither swallowing up a less influential mother tongue nor being swallowed up or corrupted by the more elaborate language on which it has drawn - can produce and maintain communication equity around the world. Such a second language should, however, have the lingua franca capacity to absorb new words with relatively little alteration, from whatever source and should have the Yiddish displays in different Euro-American settings.

A world second language, like a world system of glyphs, requires universal acceptance to work at all. Until such acceptance, experimentation, temporary solutions, and intensive research are necessary. Casting the die for one language rather than another will be as decisive as putting a new system of mensuration around the world. Failure to do so will be terribly expensive as failure to adopt the metric system proved to be.

An Invented Language

Our third great requirement is for a written form of communication independent of any of the languages of the world, but dependent upon the concepts essential to high-level philosophical, political, and scientific communication. Where the world-wide second language must be natural, formed over time by unconscious human interaction, a worldwide, exclusively written language must be artificial, consciously developed, rigorously tested by logic and experimentation. We have, of course, many such partial artificial languages now: in the Arabic numeral system, in chemistry and physics, in engineering diagrams. But the most complete model we have of a written language that is independent of particular languages is classical Chinese system of writing, through which two educated men, who cannot understand a word the other speaks, may nevertheless communicate fully with each other by writing. The Chinese characters have developed historically. They are not logical and too many of them are needed for full communication, they are heavily laden with the conceptions of Chinese thought acquired from serving 4,000 years of high civilisation. A satisfactory system of ideational

writing would require a system freed from the accretions of history, although it would not be necessary for the signs themselves to be devoid of historical origins. The contemporary symbols used in biology for male and female were once as heavily laden as a Chinese character; the male is the sign of Jove, the female of Venus. Attempts to combine them visually are esthetically unsatisfactory, for there is no logic in this directionality of the two attachments to the circle signifying a human being.

The best model we have for such an ideational language, outside of mathematics and the physical sciences, is that part of the language of the deaf which conveys concepts independently of the words of a particular language, and makes it possible for deaf students from different language backgrounds to communicate with each other. Deaf "signing" to the extent that it uses artificially constructed visual signs, does in action, in face to face communication, what a written ideational language could do for speakers of different languages.

Various prophetic forerunners of the future are beginning to experiment with such a language. Charles K. Bliss of Australia has made one of the most extensive attempts. An even less abstract attempt was reported recently by Jean Effel, a Paris newspaper correspondent.

This need is as great as the need for a world-wide secondary spoken language, but it must be recognised that the steps toward each and the demands that each must meet are almost antithetical. For the spoken language we depend upon a natural historic process. We need a language that a people has learned within the natural human setting, and we will need to teach it the same way, with maximum exposure and minimum initial analysis. For a world-wide, high-level written language for efficient communication among the educated, we must depend throughout on a conscious exercise of man's most disciplined powers of analysis and invention and upon controlled experiment.

We need glyphs for the child, the neophyte, and the stranger who can neither read nor speak the language of the place he is visiting; we need a worldwide spoken language that will enable people to talk to each other when they travel and to understand broadcasts from elsewhere in the world when they are at home; we need a highly abstract, elegant, inductively developed, logical artificial written language that the educated can read and in which they can write to, and for, each other.

With all three we could take full advantage of our new mobility and share in the kind of relationship once available only on "the village green"; and educated men and women, whatever their mother tongue, could exchange - efficiently and unimpeded by historical nuances - the highest developments of human thoughts.

There is a further problem that will attend the scientific and humane development of these new world needs. Those who first diagnose a situation have to face great opposition and ridicule, and they develop strongly defensive attitudes. When there is no hope of success there need be no compromise. Each exponent of each variation in the proposal for a universal language or a new alphabet or a new system of glyphs has tended to be fiercely partisan. Tremendous energies are expended in inter-neine battles, which in the case of the proposed new languages is said to have once left three of them with only a single advocate each! When the next step is reached, when the dream becomes a reality, a different group of people must take on the tasks and approach them with the appropriate research tools, provided by a knowledge of science, the arts and politics. This is difficult for the dedicated enthusiasts who have given unappreciated lifetimes to their special causes. It is also expensive for those who now see a chance to introduce a needed change in society. They too may be treated as fanatics, and they will encounter blind and uncompromising partisan opposition from their precursors. How to overcome this dilemma is a social science problem in its own right.

PICTURE TEXT:

Educated Chinese who cannot speak each other's vernacular tongue can nevertheless "converse" in writing. Each Chinese character carries a heavy burden of historical development, however, and a great many are needed for full expression. Biology's symbols for male and female also have historical origins; they do not logically represent the human form.

Electrical engineering has evolved simple symbols - for batteries, condensers, etc. that are now recognised and used internationally.

End of article

Final Comment of C.K.Bliss: Let me say that the blabla about learning another language, and learning languages in general is the same blabla which you find in learned dissertations on the theory and philosophy of languages. It is written only for the few whom the many don't understand. What Mighty Margaret and Mighty Modley is crying is that "RESEARCH IS NEEDED" and this means that MONEY IS NEEDED AND MUCH MONEY AT THAT, MILLIONS OF DOLLARS. And Margaret the Mighty has not been able to raise a single dollar. What a pity!

The End