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SYMBOLISM, SEMANTICS, SEMANTOGRAPHY, AND SOCIAL SYNTHESIS

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1. MAN: THE MAKER OF SYMBOLS

We are here concerned with the role of symbols in human affairs. The central importance of the topic needs no emphasis. Scientists are generally agreed that the use of symbols plays a key role in the functioning of human individuals in society. That is to say, the ability to form abstract ideas and make use of them as symbolic substitutes for thoughts and emotions is a basic trait of the human animal. Thus communication through symbolism lies at the base of human behavior. The language of written and spoken words is of course the best known of man's symbolic modes of communication; but there are other modes, as for example, the symbolism of music, the dance, mathematics, and the rest. As a core concept for study in a Congress such as this, symbolism provides a focal point for integrating diverse but interrelated fields of investigation.

Studies in the origins of symbolism, the universality of symbols, the comparative anatomy and the migration of symbols, teach us many things. Man's capacity for what Alfred Korzybsky terms *timebinding*, so well described by S. I. Hayakawa as "the ability to organize social cooperation *at a distance* and to accumulate knowledge *over* generations of time through the use of symbols," is a manifestation of the symbolic function. But more than knowledge, life itself is thus preserved and transmuted. Perhaps man's fear of death is really fear of "excommunication" -- fear of loss of contact with social reality. If so, by way of the arts man attains a feeling of security: he communicates eternally with other generations in the stream of time and thereby attains a kind of immortality. Rather than serving as a substitute for reality, as a Freudian theorist may suppose, the symbolic function lies at the very heart of reality -- at least human reality.

Considering this, is it not valid to suppose -- as Dr. Joseph Bunzel has suggested -- that symbols constitute a system of values of their own; that the language of the soul, the myths represented by the arts, are the authentic and enduring carriers of truth and insight? Is it not true that in studying archaic cultures, it is not so much their system of barter and trade, marriage customs, religious ceremonials, and the like, but rather the artistic-symbolic manifestations of these that appeal to the mind's eye? Is it too difficult to regard the delicate balance of art and life as one trustworthy model of operational devices for social cohesion, and later for social progress?

If one can answer these questions in the affirmative, then one may also look with favour on the proposal known as the *monogenesis of speech*, namely, that in the early dawn of human history a universal symbolism once prevailed and that the vocabulary of this language was enunciated in the spirit of a common brotherhood which embraced all communities. Such an hypothesis of the "psychic unity of mankind" would find some collateral support in Carl Jung's studies of the symbolism of the alchemists, where it appears that nature herself speaks through the archetypal imagery of man's aspirations.[1]

II. THE INTEGRATIVE-DISINTEGRATIVE POWER OF SYMBOLS

One early function of symbolism was social integration. But somewhere along the line as social evolution toward increasingly complex organizations proceeded, things got out of joint. That is, language, which formerly served regional groups so well, became an obstacle to further communication and understanding. Just why, at later stages, the failure of social synthesis is so largely the result of the failure of symbolism in civilization is a matter of which social scientists and statesmen should study. The explanation of the breakdown is to be found in part in the historical evolution of the various systems of communication. Today we find ourselves overwhelmed by the diverse symbol-structures now embodied in the manifold cultures which originated in their local times and places, which to those outside the group were henceforth nothing but so much "semantic noise". The diversity of tongues which emerged from elementary speech and gesture communication and picture writing is known to all students of language.

We are informed by the long tradition of Western culture that man is a rational animal. This rationality, such as it is, surely is related to the fact that man is capable of articulate speech; man would not think if he could not report that content of his thought to similar human creatures. At a later point (in section VIII), I shall survey the major steps in man's efforts at communication. The suggestion will then emerge that since man is the rational-symbolic animal, the social progress of man is measurable in terms of his increasing facilities for communication, understanding, and cooperation. Taking this as something established, one then observes that democracy as a preferred form of government is largely a political device for achieving a cooperative existence based on the free exchange of information via the several media of communication. The integrative power of symbolism is clearly evident. It is demonstrated by the role of flags, parades, cartoons, art, literature, pageantry, and the like, all of which are methods for securing social cohesion within the group where the meaning of the symbolism is recognized. Thus considered, it is obvious that man's future progress depends upon the relative success or failure of his society to utilize effectively, and improve upon, the means of communication, The sharing of experience and the enlightened interpretation of it are wholesome processes, and democracy finds its source and sanction in that fact.

III. CLOGGING THE CHANNELS OF COMMUNICATION

When a pupil once inquired of Confucius what he would do first if he had absolute power, the Chinese philosopher replied, "I would reform language." Of course, as some unsympathetic outsider might observe, "Considering the fact that Chinese languages

[1] See the volume, *Psychology and Alchemy*, by C. G. Jung, *Collected Works*, Vol. 12, Bollingen Series, 1953.

are monosyllabic and that only a few hundred syllables are available to say in thousands of homophones what can be said in Chinese, perhaps it ought to be reformed."

But before one becomes snobbish about a language other than one's own, it should be remembered that the difficulties of communication are not peculiar to any one language. Let it be recalled, for example, that even when we speak in what we think is the same language, we frequently don't seem to be using the same dictionaries. This point is illustrated (but not proved) by the comment concerning the inhabitants of Great Britain and the United States: "two peoples separated by a common language."

Indeed, in moments of despondency one is inclined to agree with the thesis that the world is well on the road to committing semantic suicide, attaining a condition in which no one understands anyone. Professor Norbert Wiener, pioneer in the science of cybernetics, recently stated that the "the community extends only so far as there is an effectual transmission of information." This gives one clue to the reason for the situation which Kierkegaard has referred to as the "sickness of modern society." The failure of civilization -- as previously indicated -- is due not only to the breakdown of established symbolisms *within* ethnic groups, but is a result also of our inability to establish new bridges of symbolism to span the gaps *between* disparate groups around the world.

To be sure, a common symbolism embodied in folkways, languages, art, ritual, and abstract science notations, is no absolute guarantee of intra- and inter-group understanding. But since understanding extends no further than communication, communication is a precondition for understanding. That is to say, a common symbolism is a necessary but not sufficient a condition for understanding and cooperation. It follows, therefore, that a universal symbolism must be produced before world understanding is possible. Later on I shall refer in more detail to the efforts that have been made in this direction.

IV SOME PROVISIONAL DEFINITIONS

We are concerned with symbolism and communication. Perhaps it is encumbent on each participant in a Congress to define some of the common terms that come up repeatedly. In any case, I wish to indicate how I shall use my terms. By communication I shall mean the transmission of thoughts, emotions, and information, by means of symbols. And a symbol -- as I use the term -- is a gesture, token, or character, which *represents* or stands for something else, its *referent*. So in th e present paper we are studying the processes whereby human beings convey ideas, emotions, etcetera, from person to person, through the various media of communication. By "media" we mean "languages" in the broadest sense of the term. Perhaps the most significant observation one can make about symbolism is that it is what links human beings together into a society. This linkage can be achieved through the many types of symbolisms -- music, mathematics, pantomine, ideographs, and so forth. Moreover, the processes of communication may occur on different levels of sophistication: primitive peoples communicate by means of sign language, picture writing, smoke signals, drum thumpings, and the like; while modern man communicates by way of conversation, newspapers, postal service telephone-radio-television systems, the language of non-objective art, and the like. But always and everywhere, men try to share experiences. When communication breaks down private worlds and isolationism are the result.

So much by way of definition of some elementary terms. The experts in the field of cybernetics and information theory may find many definitions homely and uncouth. They may prefer the high-level statement of Dr. Warren S. McCulloch to the effect that *communication is entropic coupling among humans*. To understand this definition one must have some acquaintance with the concept of entropy as this is employed in thermodynamics.[2] This new synthesis of ideas is expounded by Norbert Wiener in his volume, *Cybernetics*. This is a technical field which calls for special study.

V. THE FRUSTRATIONS OF REASON

In order to get started on my main enterprise, I begin with what may be termed a "modern paradox". The paradox is this: if thought is such a creative force in human affairs, why is the modern world always in a mess? We all know how potent reason can be in those areas where the utilization of intelligence has produced the seven wonders of the ancient world, plus the miracles of modern physics, technology, medicine, and the rest. Why is it, one wonders, that man's world today is not a restored Garden of Eden, a paradise of earth.

As I see it, there are two reasons for the world's plight. In the first place, we find the presence of powerful non-rational factors operating in human behavior and man's social institutions. Laziness prejudice, vested interests, power politics, the culture-lag -- all these constitute obstacles in the way of the free and full use of man's native intelligence. Certainly we could have a better world, *if we were willing to pay for it*. But so long as the environment lets us live at a relatively low level of efficiency men will not exert themselves. If we were willing to sacrifice in times of peace as we are willing to exert ourselves during the periods of war emergency, when survival is at stake, the world would not always "lose the peace" through laziness, indifference, "back to normalcy," and the rest.

But even with the best of intentions, and terrific drive, we would still be a long way from an earthly paradise. Much of the trouble comes from the inadequate tools of analysis and means of communication of the results of our findings. It is as if a watchmaker were trying to construct or repair a watch while wearing a pair of boxing gloves -- it just shouldn't be attempted. At the present time we simply do not have the tools -- linguistic and symbolic -- that the job requires. This brings our discussion to the topic of *semantics* -- the science of communications -- as a partial remedy for our ills.

VI. SEMANTICS AS A PARTIAL REMEDY

The word semantics is derived from the Greek word *Seme*, and means *sign* (also *semantikos*, significant). The term which Lady Victoria Welby preferred for what is now termed semantics

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[2] I have discussed the analogies between mechanical "thinking machines" and human reasoning in my paper, "Logic, Cybernetics, and Semantics," read at the Conference of the International Society for Significs, meeting in Amsterdam in the summer of 1953. This paper was published in *Synthese*, Vol. IX, Nos. 5 - 8. Along with my paper, "A Unified Symbolism for Understanding in Science" it was republished in the book by that title and is distributed by the *SEMANTOGRAPHY PUBLISHING COMPANY* of Sydney, Australia

was the word *significs*; both terms are now being employed. The customary definition states that semantics is the theory of meaning. It may also be described as the theory of *how to talk and write sense*. There is no contradiction here. In either case the implication are quite opposed to another definition which is sometimes given, namely, that "semantics is the art of defining your terms in such a manner that *you* always win the argument." I mention this "definition" because it provides the occasion to state definitely what semantics is *not*, thus obviating possible misunderstandings. Semantics is *not* a first-aid kit for literary folk; it is *not* a politician's propaganda device; it is *not* a panacea for the world's ills. Semantics is a useful part of scientific method and is concerned with understanding and improving upon the ways in which symbols function in promoting human interpersonal and intergroup communication.

In order to show how important it is to have a theory of how to talk sense, let me refer to several instances which illustrate the difficulties of successful communication and cooperation.

My first example relates to an investigation undertaken by *UNESCO*. In studying the ideological basis of cultural tensions, an effort was made by this United Nations Organization to discover whether it is possible to agree upon a definition of the term *Democracy*. A Questionnaire was sent to about 85 scholars throughout the world asking them for their conceptions of "democracy". When the returns were studied, it turned out that these experts differed considerably in their interpretations of the widely used term. Learning of the results, one editorial writer commented that the word democracy in the century of the common and confused man is like a big tent in a high wind -- something hard to pin down. One flippant observer opined that the results really aren't very surprising, considering the fact that the word ambiguous is itself ambiguous! The situation is pretty hopeless if one can find comfort in this sort of levity.

A second illustration of the difficulty of communication is taken from Clyde Kluckhohn's volume, *Mirror for Man*. After the Japanese were defeated in World War II, Professor Kluckhohn visited Japan for the purpose of studying the social changes that were taking place. As an experiment, he asked that the phrase in our *Declaration of Independence*, "Life, Liberty, and the Pursuit of Happiness," be translated into the Japanese language and then be translated from the Japanese back into the English. The phrase came out as "the lustful pursuit of pleasure." The explanation of the result is that the Japanese people simply lacked the experiences which we associate with the ideals denoted by Jefferson's terms. Whether, since those years, the Japanese people have acquired sufficient experience with the democratic way of life -- i.e., representative government, right of labour unions to organize and bargain with management, multiple party politics, and the like -- to be able to govern themselves and "explain" their new way of life time alone will tell. In terms of over-all impressions the world-situation looks gloomy. Some "realists'' foresee a "semantic suicide" for the human race -- a condition in which no one understands anybody. But the optimists believe that this is the great challenge for a new science of inter-cultural communication -- a science of social cybernetics, still to be perfected.

VII. SIGNAL REACTIONS VERSUS SYMBOL RESPONSES

Many of our human problems arise from the fact that man is a creature who uses symbols. Symbolism, like every other tool invented by human ingenuity, is a two-edged sword. In some ways we are better off and in other ways we are worse off (as compared with our pre-human ancestors) because of the superior development of the symbolic function. Not only is language the essential instrument of man's humanity, as Hayakawa puts it, but it is frequently the instrument of his more fearful inhumanities.

In order to understand the symbolic function, we must differentiate between two types of response, as follows:

1) *Signal reactions* -- illustrated by Pavlov's drooling dog.
2) *Symbol responses* -- illustrated by the analysis of the word "democracy".

If one consults the dictionaries, it appears that they do not distinguish clearly between *signs* and *symbols*. And yet a differentiation should be made; that is, we should have words in our language which differentiate between *signal reactions*, which are immediate and relatively automatic reactions, and *symbol responses*, where delayed response and a higher level of cortication are called for. The ability to employ symbols is related to man's greater capacity for abstraction, and one would suppose that, as compared with signal reactions, the symbolic response occurs on the very highest levels of abstraction. In this connection, it is interesting to note that the operation on the brain known as "prefrontal lobotomy" may free a person from obsessions (the impulse to kill or commit suicide, for example), but another consequence is the loss of power of abstraction -- one of man's unique qualities. Certainly abstraction and articulate speech are intimately related -- man is the rational animal because he is the talking animal.

The tragic thing is that we humans, who have the power to function on the level of symbol responses, frequently degenerate to the level of lower animals and treat symbols as if they were signals. This can be illustrated by reference to Pavlov's dog: the dog can be taught to salivate when he hears the bell, if every time food is placed before him the bell is rung. By constant association of food and the ringing bell, a conditioned reflex is established. Therefore the dog drools whenever this bell is rung. Now a human being who "drools" -- or perhaps "froths at the mouth" -- when a word is pronounced, for example, the word "bureaucrat" or "fascist," or "creeping socialism," is abdicating his human status and returning to the level of a subhuman animal. Perhaps "dogmatism" results when man acts like a dog: drools or froths by treating a word as a signal (bell) and snaps at the source of the stimulus, when, as a human, he should be analyzing the meaning of the sounds (word): *what is un-Americanism? What is subversive? What is democracy?* Etc., etc

VIII. THE EVOLUTION OF SYMBOLISM

We have made the point that man's capacity for symbolism is frought with tremendous consequences. To gain some idea of the possibilities, one need only retrace the course of social evolution and observe the increasing role of symbolization. We have time only for a condensed survey. The entire panorama from primitive man to modern times unfolds somewhat as follows :

Animal vocalization and gesture communication -→ picture writing -→ writing of paleolithic culture -→ cuneiform inscriptions of Sumerians -→ Egyptian hieroglyphics -→ Indo-European family of Languages -→ Greek and Roman numerals -→ Arabic mathematical symbols -→ Western musical notation -→ Symbolism of mathematical logic -→ printed books and newspapers -→ current movie -→ radio-, and tele-cast programs -→ radar and sonar techniques.

This sequence, as the reader will observe, is slanted in its later stages in the direction of our own Western world culture; but such provincialism (which disregards the Oriental cultures) must eventually be overcome--as we shall emphasize later.

The evolution of symbolism has been in the direction of increasing richness and complexity of structure. As a result of the development of languages over considerable period of time, and among the various ethnic groups around the world, two things have happened. In the first place, we have now the coexistence of the different languages of the earth. If we include the different dialects, we find that there are over 3,000 languages in existence, the greater part of which lack a phonetic alphabet. These languages have evolved in different times and places and have created a Tower of Babel in situations where people of different language backgrounds must now try to communicate with each other. A picture of the possible genetic relationships between the families of languages is given in my book, *World Philosophy : A Search for Synthesis* p. 65 but it must be admitted that any scheme is speculative in nature. The whole problem of the *monogenesis* versus the *polygenesis* of speech is still unsettled.

This brings us to the second phenomenon which has resulted from the evolution of symbolism into their present immense diversity and complexity: the fact that any of our modern languages may serve different functions or uses and these functions may easily become confused by the users of these languages.

Analysis of the several functions of language indicates that language has the following uses or purposes: the *expressive function, the poetical function,* the *ceremonial or ritualistic function,* and the *logical* or *scientific function.* All of these are legitimate functions of the use of language, provided one knows what "mode" of speech is being employed. The trouble arises from the fact that each of these functions of language has its own norms, and one is not always clear as to how language is being employed and what norms to use in judging the material. Santayana has said that religion is poetry trying to become science. By what standards, then, shall one judge what is said in the name of religion.

IX. SEMANTOGRAPHY (BLISS SYMBOLS)

So long as each culture lived unto itself and regional groups were not faced by the demands of social integration, no difficulties were created by the multiplicity of languages. Today we are trying to lay the foundations for a world community, and the barriers of language become crucial. For this reason, inventors of auxiliary languages have urged the adoption of a universal language - and so we have the advocates of

Volapuk, Esperanto, Ido, Interlingua, Interglossa, Basic English and others. However, none of them have found any practical application in spite of the fact that Esperanto has been promoted for over half a century, and Basic English for more than a quarter century.

The reason may be found in the fact that all these new artificial languages are "foreign" languages to everyone. We know how difficult it is to acquire a foreign language, even in years of high school studies, if we happen to live in a country in which another mother tongue is spoken. The mother tongue proves to be an overwhelming force, offering tremendous resistance to the use of another tongue. We see that even in the United States of America, Canada, Australia and other literate countries, people will go on speaking for centuries almost exclusively in French, German, Italian or other languages which their forefathers brought into the new country. It is difficult to make them speak in English, unless they are forced to make themselves understood in this language. Thus Babel continues.

In the meantime, a new symbolism has been developed which has proved successful in bridging the language barriers. Pictographs, as for instance a bent arrow,, displayed on the motor roads of any country are understood in any language. Similarly, the symbols of mathematics have the same meaning in all languages. It is therefore not surprising that two mathematicians, Descartes and Leibniz, have advocated 300 years ago, the development of a Universal Symbolism which could be read and understood in all languages, and which would also offer a simple method of logical operation. Leibniz advocated the use of pictographs for picturable meanings in order to distinguish them from abstract meanings. But his speculation was not realised for 300 years.

Leibniz's idea has now been worked out by C. K. Bliss, B.Sc. of Sydney, Australia, in his Semantography. I have referred to Bliss's "One Writing for One World" in my paper "Unified Symbolism for World Understanding in Science" read at the Annual Meeting of the American Association for the Advancement of Science in Philadelphia 1951. The leaflet distributed at that meeting is attached. It offers a good insight into Bliss's symbols. As to the operational semantics of his symbols I refer to the enlarged version of my paper (see the footnote about the brochure and other publications on semantography). Bertrand Russell, Julian Huxley and other eminent scholars have found words of high praise for Bliss's work, which suggests that we would do well to study Bliss's creation.

This problem of world understanding is enormous, as big as the world itself. Commenting on the source of failure of the United Nations Organisation in New York, Stuart Chase has pointed to the following factors as obstructing the efforts at arriving at understanding and agreement: translation failure, cultural differences, lofty abstractions, diplomatic double-talk, and inside talk (clear to the delegates, but misleading to the outside world). Of these sources of failure in the efforts at communication, Mr. Chase regards cultural differences as the most serious.

In view of the fact that cultural differences do more to separate people than anything else, the formula of Leibniz and Bliss, "One Writing for One World" obviously cannot provide the *complete* solution to the problem of world unity. Nevertheless, the development of a unitary and universal symbolism is an essential step along the pathway toward planetary integration.

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X. *SEMANTICS AS AN EMERGING TWENTIETH CENTURY SCIENCE*

The problems created by these historical developments make necessary a science of symbolism and communication. Such a science does not yet exist, at least not in a fully perfected form, and it is one of the tasks of coming generations to bring it into being. Without intending to depreciate the importance of the ancient Greek thinkers, the medieval nominalists, or the early modern philosophers, one may properly assert that no substantial contributions toward a science of communication were made until the last century.

The first explicit use of "semantics" as a label comes toward the close of the nineteenth century. In the year 1897 Michael Breal published his study, *Essai de Semantique*, and in 1900 an English translation of this work appeared in London. Breal's interest was not in tht theory of symbolism and meaning, but in linguistics. As a matter of fact, Lady Selby complained that Breal nowhere gave a precise definition of the term semantics. Lady Welby preferred the term "significs," which she regarded as the science of meaning in all its phases, including that of logic.

Without understimating the value of earlier investigations, we must recognize that the first adventurous pioneer in the field of semantics is the American Philosopher, Charles S. Peirce. The true stature of this soaring thinker has been recognized only within the last twenty-five years, following the posthumous publication of Peirce's *Collected Works* by the Harvard University Press. In a paper which appeared in 1868, Peirce declared that the "man who makes researches into the reference of symbols to their objects will be forced to make original studies in all branches of the theory of signs". This investigation Peirce termed *semeiotic*. He tells us, "By *seme* I should mean anything which serves for any purpose as a substitute for an object of which it is, in some sense, a representation or sign." Today the entity for which the sign is a substitute is termed the "referent" of the *sign* (I prefer the word *symbol* to sign). In passing, it should be pointed out that Peirce is also the real founder of "Operationalism" -- the theory of meaning which P. W. Bridgman and the Logical Positivists (R. Carnap, H. Feigl, C. Morris, and others) have perfected. The results of their cooperative research appears in the ambitious *International Encyclopedia of Unified Science*, published by the University of Chicago Press.

Following Peirce, little was done in this area for a number of decades. But at the close of World War I, a growing interest in the problems of communication, propagenda, and "words that win wars", gave a great impetus to studies in symbolism and what soon came to be known as "semantics.".

Two events spearheaded the growth of semantics. In 1922 the well-known work, *The Meaning of Meaning*, co-authored by C. K. Ogden (inventor of *Basic English)* and I. A. Richards, was published. This work helped focus attention upon the subject. Ogden and Richards also established the importance of the distinction between the *symbolic use of language*, as employed in science, and the *emotive use of language*, as in religion and poetry. Of course, the Ogden-Richards "triangle of reference" is now familiar to all students of semantics.

The second major event in generating a lively interest in semantics was the appearance of Alfred Korzybski's massive work, *Science and Sanity: An Introduction to Non-Aristotelian Systems and General Semantics*, published in 1933. Count Korzybski, the Polish engineer who later became a citizen of the United States, invented the system of *General Semantics*, which he repeatedly explained and applied in the seminar courses offered at the INSTITUTE OF GENERAL SEMANTICS, formerly located in Chicago and now located at Lakeville, Connecticut. There is not space in the present article to present Korzybski's basic formulations: *time-binding, levels of abstraction, map-territory relations, multi-ordinality of terms, non-elementalism, infinite-valued orientations, the structural differential* and the rest. Nor is this the proper occasion for explaining the several "semantic devices" for correcting our "unsanities" and making it possible to create a "sane" society. It suffices here to say that anyone who aspires to know something about semantics must study Korzybski's *Science and Sanity*, whether one agrees with his formulations or not.

This brings our brief survey of the development of semantics up to date. Now let us summarize the major problems in this field.

XI: MAJOR PROBLEMS OF COMMUNICATION

Once the study of man's symbolic activities was fully launched, many interesting problems were revealed. It is not possible to investigate them in this article -- some of the problems will be further explored in the following articles -- but we can at least enumerate some of the questions. Among them are the following:

1. What is the symbolic function? What biological mutations were required in order to confer upon man the "gift of tongues"?

2. Why don't sub-human animals -- such as the anthropoid apes -- employ articulate speech?

3. What are the important stages in the anthropological development of symbolism from its crudest beginnings in primitive culture to its latest and most refined forms of expression?

4. What are the geographical origins of the various languages? What are the genetic relations between the world's families of languages?

5. How many functions are served by human speech; that is, how many purposes does language-behavior exemplify?

6. What is a word physically, as a visible or audible symbol?

7. How are symbols converted from their physiological bases into the conscious recognition of meanings?

8. Could man talk (have the language -- capacity) if he couldn't think? Is thinking merely "sub-vocal speech"? How do children learn to talk? Why do adults forget some words and not others?

9. What does the anthropologist mean when he says that a language is a philosophy (see Kluckhohn, *Mirror for man*, p. 167)? Is it true that there are unconscious assumptions wrapped up in the structure of any language?

10. If, as the anthropologists say, every language is a special way of looking at the world, how is it possible for peoples of different language habits to communicate with each other? Or isn't it possible?

11. What more is necessary to promote world understanding? Would the adoption of a universal language achieve this? How can existing languages be made more reliable as media for expressing and communicating ideas and feelings? Are all languages equally adequate for representing the "truth" about man and nature? Is the Indo-European family of languages peculiarly suited to the purposes of science and philosophy?

12. What are the cultural conditions most favorable to free and full communication? How can "mass media" be improved as vehicles of communication? What can be done to utilize transethnic communications to attain cultural universality? How can the Oriental world acmeve a more adequate knowledge of Western Culture? What can be done to improve our knowledge of the arts, the religions, and the philosophies of the East? In general, how can education employ the channels of communication for the promotion of the higher and more enduring values of human culture?

XII: SOME GENERAL CONCLUSIONS

Certainly it is not possible for students of symbolism and communication to give the answers to all such questions. But some progress is being made. Many suggestions are now being advanced concerning the possible ways in which communication between persons, groups, and nations, may be facilitated. It is finally becoming clear to all of us that if our social world is to survive, the diverse peoples of the world will have to learn that cultural differences have their sociological bases in regional environments -- they are the effects of environment turned into history. One might say -- so that the great human adventure can be salvaged from self-destruction only if men learn to attain universality in value judgements no less than objectivity in truth-judgements. In a planetary democracy -- if it ever comes -- freedom to explore the truth will be accepted as *the* basic human right. In that day, also, we will have discovered methods for achieving cultural cooperation and synthesis based on a new science of social cybernetics employing global radio and television programs and chanels. In that day such metaphorical phrases as a "world mind" and the "psychic unity of mankind" may be taken quite literally and will no longer merely reflect the pious aspirations of a troubled and bewildered family of nations involved in the battle of ideologies.