

The Semiotic Processes of the Formation and Expression of Ideas

From: *The Sociogenesis of Language and Human Conduct* (Bruce Bain, Ed.). New York: Plenum Publishing Corp., 1983, pp. 377-391.

Several peculiarities of a semiotic nature add themselves to the numerous contradictory characteristics of our epoch. Although language continues to exercise a dominant role in socio-cultural processes, a variety of other sign systems (e.g., art, social and political forms of ceremonial, new rites imposed by the media of communication or the artificial media connected to computer technology) tends to occupy a role comparable to the language called natural. These other sign systems even limit language's sphere of action. The credibility crisis that language is going through and the imposition of these new sign systems (some strictly normative) in socio-cultural practice are two phenomena that are evidently connected. The resurrection of interest in semiotics is in turn explainable in this context. Although belief in language as a means of communication has declined, the objective process of social development is characterized by an accentuated semiotization. The relationship of the human subject, as an individual and as a social being, to the object in its varied forms of existence (including the subject as object) is more and more mediated through *signs*. Instead of direct action on the object of labor (raw material, processed material, nature), mediated action is imposed, at the beginning through tools and machines and at present through action algorithms. Education, culture, and political practice are coming through less directly; mediation takes place through signs, and practice becomes a matter of *interpretation*. The consequences of this process of semiotization--as a form of (wo)man's alienation corresponding to a new stage of his/her evolution--are difficult to anticipate. The legitimacy of semiotic research, in direct connection to the process of semiotization, is obvious under the premise of the philosophical establishment of this research, but not as an additional step in the direction of transforming all that exists into signs and semiotic processes. This premise should not be taken for granted or regarded as a bagatelle. The affirmation that anything can be interpreted as a sign system (which is true in principle but not relevant) becomes efficacious only after it has been shown exactly how the sign is produced and what its defining relationship is regarding the object for which it stands and its interpretant (generic, hence infinite). This is the aim pursued by the text that follows, the object of which is precisely the presentation, explanation, and interpretation of socio-historical processes that bring about the constitution of the *idea* (itself interpretable as a sign--very complex, of course--representative *for* a particular society and moment of its development). To carry out this objective, several elements of semiotics (sign, semiosis, meaning, semiotic field, etc.) will be introduced progressively without being elaborated upon (although a consensus regarding their definition is far from having been reached). The references can aid the interested reader in furthering his/her knowledge.

The simplest representation of a *field*--a concept coming from physics and algebraic typology--can be found, like so many other things, in Lewis Carroll's *Alice in Wonderland*:

"I wish you wouldn't keep appearing and vanishing so suddenly, you make one quite giddy."

"All right," said the cat: and this time it vanished quite slowly, beginning with the end of the tail, and ending with the grin, which remained some time after the rest of it had gone.

"Well! I've often seen a cat without a grin," thought Alice; "but a grin without a cat!"

The field is a "grin without a cat," be it the magnetic field (visualized by iron filings around the poles of a magnet), the electromagnetic field (around a wire through which electricity is transported), the gravitational field, or human fields of action at distance (the ethical, aesthetic, ideological, and psychological fields, etc.; Hartmann, 1948; Lewin, 1939; Nadin, 1981).

The semiotic field can be more precisely defined only on acceptance of a definition of sign; otherwise, the grin ceases to refer to a cat--that is, to semiotics as a scientifically founded discipline--and eventually remains only a metaphor. Throughout this chapter, the definition of *sign* utilized will be the one given by Peirce: "A sign is . . . something which stands to somebody for something in some respect or

capacity" (1960, 2.228). The sign, then, is the unity of the three elements: object, sign *per se* (which Peirce also called *representamen*), and interpretant, a unit understood in the dynamic sense (realized in semiotic processes or, as they are also called, *semioses*). The sign, as a unit around which the semiotic field is constituted, actually fulfills two functions: communication and signification. These functions--which in the reality of the semiotic field are impossible to separate--are made evident in semioses. All signs participate in the reality of the semiotic field and are of necessity interpreted in this field. The field is not a mental construct substituting for the reality of the sign and its action (fulfillment as meaning, for instance), but is precisely the medium in which signs associate or disassociate, in which meaning is constituted, in which semiotic interaction is carried on between different sign systems (of language, art, religion, norms, science, etc.). It is probably in this sense that Rossi-Landi's (1979, p. 358) affirmation regarding sign as "the center of a network of social relations" can be understood (cf. Williams, this volume)

The signs of a society (related to the mode of grouping) and of the persons in it--as well as the motives (direct, indirect, conscious, subconscious and unconscious, psychological, logical, etc.) behind this grouping--are not simply generated by this society; they represent a given framework as well as the object of present and future action. Social coming-of-consciousness is *par excellence* semiotic without being reduced to expression in doubly articulated language (man's most complex system of signs). The confirmation of social existence in space and objective time--whose semiotic representation is one of place and moment--is mediated through signs. In the actual semiotic field, the human being disappears "beginning with the end of the tail" (in other words, his/her concrete materiality), "and ending with the grin," with what we shall call his/her *ideas* (in the broad sense). We can therefore continue asking ourselves how they are formed, how they are expressed, and what interaction in the semiotic field exists between ideas (pertaining to one domain or to many different ones).

No matter which type of semiotics defines them, signs can only be material, individual, and concrete--hence spatially determined--whereas ideas, inexpressible without the intermediary of signs, can be only general, abstract, and spiritual--hence temporally determined. This paradoxical condition stems from the condition of the sign itself, which cannot be justified as such except in relation to another sign. Any set of signs, incidental or necessary, can be considered a unit between a repertory (the inventory of the signs of the set, also spatial) and sign operations (semioses, hence successions), the idea expressed being a distinct semiotic set enhanced in a context. The transition from *something* of the condition of space (the sign) to something else of the time condition (idea) is basically the fulfillment of meaning and its repeated retroaction on the sign it brings about.

Obviously, when discussing ideas--the subject so much disputed by traditional philosophers--we must ask ourselves whether they truly find their origin in linguistic activity (as it is insistently affirmed in our day), whether the signs participating in their constitution are merely those of speech (writing, in this concept, itself determined by speech), or whether other things participate in one way or another in the process of forming and transmitting ideas (Nadin, 1980). The role played by speech in the communication of ideas is incontestable. But as far as the formation of ideas is concerned, things are not so simple. In fact, the signs of speech--in their concreteness, materiality, and individuality--are in principle the same as any other sign; that is, spatial.

Humans not only express themselves to (enter into contact with) one another through their sign system, but also "listen" to themselves. They are both emitters and receivers. Signs succeed themselves in a series of self-controlled sequences. Communication at the level of nature (a subject approached by zoosemiotics) does not cease even when the natural condition becomes predominant, Subverbal, unarticulated language (at the signal level of smell, touch, taste, etc., or kinesic or proxemic language) participates in the definition of sensations directly, as well as through specification of context. The interrelationship of articulated language and unarticulated subverbal languages shows up at the level of predominantly natural activities (the life cycle as a natural cycle) as well as at the level of predominantly socio-cultural activities. When the sign of speech becomes a sign of language, the process deepens. The concrete sign (written, stabilized) participates in the definition of the abstract. The succession of individual signs is metamorphized into the sign of the general (supersign). The materiality of expression supports the spirituality of the idea.

We do not dispose of a system of signs in the way a person disposes of some machine or elements

to be assembled. Humans are sign and language--an intuition that confers upon Peirce's semiotic system a surprising opening, in the sense that (wo)man occupies a place in the network of social relationships and is identifiable through these relationships. Signs, communication, and signification complete themselves reciprocally and can never really be separated--their separation being a common error in today's semiotics. In speech, for example, the sequence of signs emitted cannot be separated from their speaker, as in the case of kinesic or proxemic systems. (Humans are, themselves, part of the sign.) Not even writing changes the human condition of being part of the sign, but permits its progression from the individual (the one who writes) to the general (interpretant, "reading" species). Writing is always less concrete, poorer, and more impersonal than speech. The meaning conferred through writing is brought about, however, through a process of generalization, of *re-individualization*; that is, writing is read (and this means it is heard, seen, felt, smelled, etc.). In short, it inversely travels the route that led from speech to writing, from the concrete to the abstract.

Another important aspect connected to the fact that humans are themselves a sign (language, in particular) results from the semiotic analysis of generative mechanisms. On the one hand, we have the finite reality of signs and on the other, the practically infinite reality of ideas. In view of this phenomenon, the question arises regarding the source of ideas as well as that of the relation between signs and the meanings that can be expressed by them. The most troubling representation (hence, idea) that we owe to signs is that of the future. Pre-sensing (premonition) is the natural form of the diffuse perception of time, a perception that can be immediate or less immediate and that is extended not from *now* to *what was* (stored in the memory or not) but to *what might be* (a sign of danger, for instance, on the level of nature). The subsigns participating in these representations are indexical (and therefore imply iconic elements). Speech makes premonition and feeling explicit, but not wholly so, transforming accumulated signs (past) into signs of the possible (future), in the sense that it points to the fact that any past was once a future. Monoarticulated speech (signaling), as well as ideographic writing, is located at the pragmatic-affective level. The idea is constituted precisely on surpassing this level. The prospective force of articulated speech, as well as that of writing, reflects the generative capacity of signs. (I repeat: humans are themselves sign and language).

While dualism is the source of some of the weaknesses of Chomsky's conception, it should be pointed out that his model, based on the opposition of competence and performance, permits the approach of language learning, as well as that of generative mechanisms, the latter participating in the elaboration of ideas. The sign of language--whose object is always the uttered sign (with the object in (wo)man's interior and reconstructed in its ideality)--represents the dialectic unity of the phonetic and the semantic units that are obviously contradictory, interdependent (one does not exist without the other), asymmetric (the first determines the second), and auto-dynamic (the retroaction of the semantic on the phonetic determines the evolution and refinement of the sign as a whole). The learning of language is not reducible to the memorization of expressions (Skinner, 1957); the interaction of stimuli and responses is unable to explain the creative nature of human language (the formation of ideas, for instance), although this interaction plays an undeniable role. In fact, (wo)man is not born free of experience nor free from the evolutionary cycle of his/ her species. Speech (and later writing) was not the result of evolution from natural to socio-cultural communication but of the moment when society and culture were founded: "The birth of speech does not exist more in humanity's prehistory than in the life of the child. Speech has no origin, it is origin (*Ursprung*)," Buytendijk, 1965, p. 121). So linguistic performance is the realization of competence--a result not of learning but of living, of practicing language, of existence as language; that is, of the fact that (wo)man does not dispose of language but is language at a certain level of his/her evolution (individual on one hand, as a species on the other).

Ideas--to return to the subject of this study--once expressed with the aid of signs, in turn become signs. Thus the process goes on, often in connection to (wo)man's direct experience but also to his/her stage of evolution. An idea expressed in a complicated linguistic form has a high degree of correctness but is rarely attested in the use of language. The explanation of the discrepancy between *correctness* and *attestation* lies in the fact that out of the infinite totality of enunciations generated by the linguistic mechanisms belonging to our *competence*, only a finite part, belonging to *performance*, is used. We know how to read, but reading competence is carried out in finite performance (which is all the more restricted through selective reading: literature, professional texts, newspapers, financial texts, etc.). Aesthetic competence involves an even more complicated problem: partial competences--including specialized

scientific ones--which are denied in the very act of performance. Linguistic performance is of necessity repeatable. Aesthetic performance, of necessity, undergoes continuous change, not only in the act of creation, but also in the act of reception. The fact that linguistic determinations are among the most important should not lead us to reduce everything to verbal language. Nonlinguistic forms of communication participating in social processes, especially forms of signification (presupposing semiotic systems of codification and decodification that are among the most complicated in direct relation to the meanings instituted), give evidence of the mechanism in which the realization of competence in performance takes place.

Research on generative and learning mechanisms (in particular the creative types--which are not only aesthetic or aesthetically relevant--and those of understanding--again not only in art nor concerning aesthetic values) in humans and in animals prove that humans are the only known beings capable of manipulating (of mastering in generative and learning processes) infinite languages. The mechanisms taking part in the formation and communication of ideas are of infinite creativity (a finite repertory of signs called the alphabet generates an infinite collection of finite series called sentences).

Since the brain does not reach completeness of thought without speech, thought itself cannot be carried on without the support of signs (sometimes sequential, sometimes configurational) which (wo)man reads as meanings in the "book" of his/her environment (natural, social, cultural, etc.). Perception of the world is a condition for knowing and understanding it. The language of the world is not verbal, but is articulated at the level of the elementary sensations (Merleau-Ponty's "participative perception") that the world occasions and which (wo)man perceives at the semiotic--hence cultural--level as stabilized meanings. If the word is the body of the idea, then the word itself has another body which is the sign system of the world in which (wo)man exists. Speech does not escape the senses, but neither does it automatically reflect them. Between the senses and speech--hence between nonverbal and verbal languages--numerous influences play a role. Words obviously have a richer content of knowledge than perceptions. Speech--a social phenomenon *par excellence*--adds to sensorial information intellectual information capable of reflecting not only the present but also the absent: genus, cause, future. That this concept is not necessarily arrived at in non-European cultures reflects the fact that languages do not participate passively in the establishment of culture; they are also components of the latter and live in its reality as a dynamic factor.

On the basis of historic (however limited direct sources are) and systematic arguments, the evolution of the word--from the univocal to the ambiguous or *vice versa*--can be brought into discussion. The same analysis can be completed (and it is relevant only to the extent it has been completed) by determining the evolution of art or of specialized languages (the latter, being more recent, lend themselves to the analysis in question). Nevertheless, it is proven fact that systems of univocal signs can participate in the production of ideas only to a small degree. Polysemy is a gradual acquisition and reflects the principle of retroaction of meaning on the sign (particularly of significance on the *significant*). Philosophy and literature (and the arts in general) become possible only at a certain level of language development, hence from a certain level of social development. The philosopher, for example, resorts to *common* speech (verbal language) but uses it in an *uncommon* way: metasemically, metaphorically, and metaphysically; therefore, categorically. Ancient philosophy is still so metaphoric that it can be read as literature. Modern philosophy (post-Heidegger) shows how *relations* (which it points out and dwells on) have absorbed the *related*. The crisis of language--actually the reflex of the fact that the limitation of any philosophy is the language expressing it--has aroused an attempt at liberation from the word (but not from meaning) pursued in the reality of formalizations, themselves unrealized outside of adequate interpretation (the complementarity of model-interpretation as an axiom of analytical philosophy). It is no less true that the process we define also corresponds to a change in the functions of philosophy and in its role. It is a social system's most abstract form of *retroaction* (feedback); the meaning it proposes consequently influences not only the signs of value but also value itself. The heuristic content of the metaphors of philosophy (and of the myths through which it is constructed and reflected) is intertwined with expressive content.

The history of philosophy--as one of the histories of production and communication through the signs of ideas--records the step-by-step progress from connotation to denotation without the danger of the establishment of an artificial language (a so-called philosophical language) manifested in any way. The idea sets itself up as a unity between the intellectual force of concepts and the emotional force of

morphosyntactic constructions. The distance between the verbal significant (implying subverbal and paraverbal significant) and the super segmentals of language, for example and the significance of the idea--hence the distance between sign and meaning of the idea--is maximum in relation to all other forms of semiotic expression. The distance is itself a parameter of the evolution from nature to culture (society, in particular) and, within the framework of culture, from one stage to another. Lengthening distance is not a criterion *per se* of human progress (hence not a criterion of social progress but certainly one of progress of the semiotic system of culture. The sign is arbitrary in relation to the idea it embodies. The idea rejects individuality and institutes the general, essential meaning which knowledge revealed in the order of nature or thought. In expression of the idea, rational rigor (the degree of necessity at the semantic and syntactic level) is animated by the expressivity of the semiotic system; that is, it bears the distinctive mark of its immediate interpretant. Ideas express the implicit will to be expressed (what Marcuse, 1964, called "the imperative quality" of thought). The appearance of supertemporality of ideas (what is expressed in the Platonic model of the universe of ideas) stems precisely from the sense of revelation (in the idea) of a content that was, is, and will be noticeable.

The apparent supertemporality of the idea stems from the mechanism of its formation, communication, and realization (what I call the instituting of meaning). Essentially, this is a question of sign processes that develop like Markov processes: the influence of the past is limited to the value from which it started out. (A *Markov process* describes an aleatory evolution which, starting out from a moment t , depends only on the state of that moment t and not on the way that state was reached.) The appearance of a certain sign in a certain sequence that participates in expressing an idea (qualitatively, things stand the same with the "sequences" of art) is due to the idea's *heredity*, that is, to what extent at moment t , when it is expressed, does the sign in question participate in the constitution of the idea.

The isomorphism between the structure of the semiotic processes of forming ideas (in the complex context of social existence) and the structure of the idea itself reflects the idea's processive realization in time. Each idea is the result of choice in a certain paradigm, a result which acquires its determination (realization as meaning) through insertion in a context. The idea is itself a sign which is communicated (predominantly information value) or is realized in processes of signification (interpretation and specification of meaning in one context or another and always in the historical context, hence in the framework of time). Transition from the level of competence (infinite) to that of performance (finite) is not the same on the individual level (the person as a concrete identity) and the social level (the person as a member of a species subject to historical, economic, and spatio-temporal determinations). In relation to the biophysical component, the role of the social component in producing and communicating ideas at the collective level (groups, strata, classes, etc.) is greater.

It can be said that human society, like the human brain, is a black box, but a less complex one. Therefore, algorithmic models of the formation of social ideas have greater relevance than those concerning individual ideas. It is true, however, that ideas are not born under the mark of anonymity, even though in the process of their realization they earn their independence from the one who produced them and become, through continuous (self-)perfection and (self-)refinement, the ideas of a time, of a class, of a society. This process of *anonymization* is also reflected onto the semiotic condition. It seems that works of art tend to single themselves out more and more, becoming signs of the author projected on the background "sign of an epoch." Other examples can be given, the significance of the process being of interest from the perspective of the transformation of signs of a certain quality (symbolic, for example) into another type of sign (indexical, for example) unequivocally referring to an author.

The idea is on the order of the possible (which in Peirce's system corresponds to Firstness); the concept (category) is on the order of necessity (Thirdness in Peirce's system); the jump from one state to another is made by transition through reality (Secondness). Thus arises the need to define semiotically the forms through which these transitions actually take place (Nadin, 1982). Therefore, we shall analyze the sociogenesis of writing and speech in order to determine what is communication and what is signification.

The object for which the *written sign* stands is the *sign of speech*. But writing came a relatively long way before reaching this semiotic condition. In prelinguistic forms, graphic representation had its object in reality--the representation of the absent--since what is present need not be represented (no necessity exists in this sense). The direction impressed on visual representation is from past to present. What must

be retained is the originating tendency of distancing in respect to the present, the direct. Initial representations have only a communicative function; in particular, they retain information about the absent that is not seen (heard, felt, smelled) for future relationships between (wo)man and his/ her environment. Codification appears later, on the level of signification. The image belongs to nature; that which is communicated is the way of seeing it (more precisely, of perceiving). Hence the attitude regarding it is implicit. The execution of the written sign is not its realization as information-as in the case of pictographic representations--that is, not *how something is written* but *what it means*, that is, *what is the meaning of what is written*. Again, we find ourselves before a problem of applying competence/performance criteria in the sense that a relatively small number of signs (the alphabet and the respective punctuation and diacritical marks) participate in the infinite competence of writing. Pictographic representations precede double articulation but do not disappear together with it, evidencing instead a new meaning.

If the material of thought is words (see also Wald, 1979) and all that pertains to them from the other forms of human language, the stabilization of thought comes about with the stabilization of signs--of writing, that is. The present loses its impact of immediate action; the sensible is rationalized; what we read is no longer the colors and forms of nature, but colors and forms charged with meaning. No written word has ever reached the surface without being "uttered" and "heard"--that is, without being "sensed." The reality of meaning stems from the ratiosensory establishment of language. It is not accidental that spatial establishment (in village-type settlements) and the establishment of language in writing, also of a spatial nature, are synchronous (cf. Leroi-Gourhan, 1964). Also not accidental is the great moment of Greek philosophy in the temporal context of "alphabetization." Socrates, as the philosopher of the way of thinking and discovering truth through the dialogue, defends oral culture. Heuristics and maieutics are essentially oral, presupposing the philosopher's physical presence. Aristotle belongs to culture, to writing. Plato, situated between the two, can thus observe and express the consequences of writing:

I cannot help feeling, Phaedrus, that writing is unfortunately like painting; for the creations of the painter have the attitude of life, and yet if you ask them a question they preserve a solemn silence. (1937, p. 278)

As one of the first philosophers of writing, Plato cannot yet observe that writing is not simply the transcription of thoughts (of the words *through which* and *in which* (wo)man thinks), that ideas are formed differently in writing than in speech, that writing represents a qualitatively new semiotic system in which meanings are formed and communicated through a mechanism once more mediated in respect to the system of reality. Through writing arises the possibility of communicating and signifying at the same time (cf. John-Steiner & Tatter, this volume).

The history of culture has recorded numerous attacks against writing, culminating in Marshall McLuhan's (1964) philosophy: alphabetic cultures have *uniformized*, *fragmented*, and *sequentialized* the world, generating an excessive rationalism, nationalism, and individualism. Here we have--in a succinct list--the indictment made of "Gutenberg's galaxy." Commenting on *A Passage to India* by E.M. Forster, McLuhan quotes and draws his own conclusion:

Rational, of course, has for the West long meant "uniform and continuous and sequential." In other words, we have confused reason with literacy, and rationalism with a single technology. (p. 30)

The consequence of these attacks--as much as they can be judged from the historical perspective--has nevertheless not been the abatement of writing or of its influence. In the same vein, the need to proceed to an oral-visual culture has been idealistically suggested (in addition to McLuhan, Barthes' plea, 1970, can be cited), since through its globality and synchronism, such a culture seems more faithful to human conscience than is the analyticism and sequentiality of alphabetic writing.

What is actually the opposition between the phonetic, sequential system and the ideographic, global one? The two great cultures of humankind give evidence of the following opposition: one is a great analytic, discursive (rhetorical, at the extreme) culture; the other is a great synthetic, configurative (dialectic, at the extreme) culture. The meaning instilled in the first case is based on the *additive* mechanism; in the second it is based on an *integrative* mechanism. One can thus understand why

alphabetic writing--although more simple and stabilized--is really more difficult than ideographic writing. The effort to abstract that which it implies (and in fact contains) obliges the reader of the alphabetic text to run the enormous cultural distance separating the graphic sign from its referent in order to determine meaning. The reader of the ideographic text has the advantage of the concreteness of the representation. We have referred in both cases to the reader formed in the spirit of one or the other of the cultures mentioned. When confronted with a way of writing different from that in whose spirit he has been educated (culturally formed), the human subject must "invent" this writing step by step (not an easy task), because every language integrates its own history. Research undertaken in recent years shows that at a certain stage, aphasia brings on a regression from alphabet to image reading as design, as pictographic, iconic reading. Letters lose their identity. Ideas crumble like buildings shaken by an earthquake. What is still perceived is the similarity to concrete things. The decline from the abstract to the concrete is a socio-cultural accident taking place against the background of a natural accident which psychologically and linguistically has not been researched with much care.

The tendency to abstract and the tendency toward hermetic discourse (an expression of excessive chiseling at the sign, that is, of over-soliciting the representamen) are semiotically relevant to the integral condition of communication and signification. The mystification (masking, hiding) of the represented object, that is, the establishment of a vague meaning which only "strong" contexts can point out, is, in the semiotic sense, a return to the origin of speech and language. The above observation obliges us to present a few more words of explanation. It is known that the oldest preserved cave drawings are indexical signs of an oral context rather than representations of hunting scenes (even though they are often interpreted as such). The magical value of the first representations (likewise the ideological field instituted by the proposed meaning)--representations that codify messages intended to be secret, addressed to the initiated--is the necessary reference in analyzing later hermetic expression (including today's). The manifestos of hermeticism of all types represent an ideological rather than an ontological justification. The transition from speech to writing is in fact the transition from the pragmatic-affective level to the intellectual-rational level. It takes place in the context of the evolution from syncretic to analytical logic and is made concrete by substituting categorical epistemy for mytho-magical epistemy. These affirmations concern the semiotic universe of European cultures (and their later extensions), an observation which imposes itself here due to the distinction proposed in the foregoing pages. The cultures of the Far East are characterized by language's tendency *to represent* and not *to explain*. There, logic has a predominantly dialectic nature:

An analysis of concepts, a sharing of themes and definitions are not necessary and sometimes even an impediment. The examples are those which most often stimulate adhesion. (Elders, 1966, p. 392)

The analytical structure of logical thought is actually formed in the sentence structure of speech, which is fundamentally different in the two cultures referred to. The imperative energy of the act of expressing confers on the Chinese language, for example, a continuous state of birth (speech in the act). It should be pointed out here that there is a level from which it becomes possible to speak (express oneself) about one's language, and this level corresponds to entities without referential meaning (phonemes in the familiar case of doubly articulated language). To speak about visual, kinesic, proxemic, or paralinguistic language in the terms of these languages is only partially possible (imitations, for example, rarely attain the level of self-evaluation and never the level of generality). Metalanguage can be descriptive, prescriptive, or explanatory. In the concept of Indian grammaticians, for example, linguistic metalanguage refers only to the form of language but not to the concrete individuality constituting its object, so that it does not pertain to knowledge. The preeminence of the act in oriental culture is reflected by the central position the verb occupies. Concentration around the verb orients thought toward the relationship between condition and conditioned. In this logical universe--semiotically, perfectly determined--definition is a cognitive act of primarily pragmatic value. The relationship between index and indicated (index in the sense strictly determined by Peirce's definition) is predominant and not that given by the hierarchy of genus in the universe of the logic of Indo-European languages.

The experience of logic characteristic of European cultures (under the distinctive mark of classical Greek philosophy) shows that the main instrument of categorical thinking is the noun. It is freer than the verb (tied to the forms it specifies), more stable, capable of reflecting identity, invariance, and the

universal. The logic founded on this premise is oriented toward the search for unity between species and genus. European writing and oriental ideographic writing have each participated in this process of defining logic, being complementary from the historical perspective. Recalling not only the history of knowledge but also history *per se*, we can say that the European Occident achieved the meaning of knowledge and world control while the Orient achieved self-knowledge and self-control. It would be utopic--but also practical (with vast historical, social, ideological, political, etc., implications)--to imagine a world uniting these meanings.

The isomorphisms between the intimate structures of living matter and the structure of language can lead to the suggestion that cultural models (semiotic expression of complex ideas) permit the discovery of natural laws. This idea is apparently situated in the extension of animism. But as "Savage Thought" (Levi-Strauss, 1962) tends to equate nature and culture, "Civilized Thought" tends toward the opposite direction. The progress (still in its initial stages) made possible by modern science should not lead us to make hasty generalizations. The dissolution of thought in speech is one extreme; the withdrawal of thought from speech is another.

The nucleus of communication is dialogue. But to carry on dialogue does not necessarily mean putting two people (consciences) into relation but two semiotic structures showing up in social reality:

In communication, meanings are transmitted not from one person to another but from one sign to another from the minds of the same persons.... The essence of the act of communication is to modify the signs that bear a given meaning. (Hoermann, 1972, p. 179)

Communication on the level of nature (between animals, for instance) is non-dialogical, non-articulated, and unhistoric. Signaling (for danger, presence, etc.) awaits no response. Speech, hinting at the absent--hence, situations beyond the perceptual horizon--at the future, at essence or law, is a self-regulating semiotic system. In this sense, any act of speech is a dialogue with the self, continuous interrogation. In written communication, dialogue is established with difficulty, presupposing presence precisely to preserve the temporal nature of the idea taking shape in dialogue. In reality, signs are born (produced) under the mark of dialogue: to stand for an object (as sign) means to stand for someone (interpretant). Dialogue is founded on the reality of language's second articulation (cf. Martinet, 1939). It is difficult to say whether dialogue created double articulation or whether double articulation is the cause and explanation of language's capacity for dialogue. It is certain, however, that the continuous ascension of meaning from the reflection of individual appropriation of things to the discovery of even more general properties (in the metaphoric energy of the representamen) is achieved in dialogue-type semiotic processes. Writing--which was intentionally analyzed before dialogue--represents a weakening of dialogue from the imperative of copresence on the other. On one side we have postponement of the response (or its suppression), and on the other, projection of the question over time, that is, a kind of projection of doubt in the semiotic field. But writing is not possible outside the semiotic field.

It must also be pointed out that writing, as a symptom of undermining dialogue, has a social connotation, too. By its nature, dialogue is democratic, inviting confrontation, knowledge, and self-knowledge. Anyone who analyzes history from the perspective of this semiotic truth will observe that the forms of governing through writ have been non-democratic (despotic) by nature (cf. Illich, this volume). But writing in respect to other prior forms of expression (pictographic, ideographic writing, etc.) is more democratic than the latter in the sense that it is more widely accessible and has become a social asset. Contemporary audio-visual forms which impose themselves as alternatives to writing (communication systems) affect dialogue even more. Neither radio nor television, speeches nor cybernetic information systems, have openings to dialogue; their effectiveness makes them necessary media. The lack of dialogue--which semiotics not only observes but also explains in its specific terms--causes the message to become predominantly pragmatic-affective ("hot"), this too being a symptom of an attempt to surpass the rational. Sometimes, in escaping from dialogue's critical control, even alphabetic writing tends toward a system of signs that are no longer intended to be uttered, purged of any sensible content, sufficient in themselves. This characteristic explains the word-processing systems in which content becomes secondary to the signs utilized to express it.

Is it true, as Whorf (1963) and others believe, that "a change of language. . . transforms our conception of the Cosmos"? In other words, is the semiotic system of language a means of knowledge or even its content? The logically possible answers are located between the extremes of absolute objectivity and absolute subjectivity. From the gnoseological perspective, languages are pertinent to relativity. We live not only in nature but in a social environment. We live in our sign system, and our solidarity with it manifests itself in the semiotic retroaction in which we participate (and which is aesthetic, ethical, logical, epistemological, etc. by nature). Things do not circulate in thought; the idea is not a conglomerate of things. Concepts are formed at the level of the meanings and not at that of signs, whose arbitrariness grows in proportion to our operative and memorative capacity (individual and social). The experience accumulated in language is socio-cultural but placed in the species' semiotic field.

The sign negates the object. More precisely, semioses simultaneously represent the unity between object and its sign(s) as well as their opposites in the semiotic field. Unity guarantees recognition, a process in which the interpretant subsign is implicit. Opposition explains the inexhaustibility of semioses, endlessly stimulating the continuation of refinement of the sign and thus of meaning instillment. Objects are concrete, phenomenal, individual. Signs tend to be abstract, essential, general. Growing distance--recorded in the history of culture between sign as sign (representamen) and its meaning (respectively, between significant and significance from the perspective of de Saussure's concept)--is only a measure of the semiotic field. The tension between sensorial perception (of fundamental signs) and rational understanding in which the human sign of speech takes part (implying fundamental signs) explains the semiotics of the absent as a semiotics specific to man. The signal is as the thing: It communicates directly. The sign, rejecting the object, communicates indirectly; its form of fulfillment, called *signification*, means the institution of sense and its progressive achievement. The signal means acceptance of things as they are and adaptation to them. The sign sets up negation as a specific human attitude and radically differentiates (wo)man's indirect connection to his/her environment from the direct contact between animal and nature. The most exact definition of the sign is a *mediator*.

The negation it contains causes meaning to be irreducible to sensorial content, and, likewise, acts of thought to be inseparable from sensorial acts; the negation is fulfilled in the contradictory reality of meaning. Disposing of many sign systems and capable of realizing the difference between natural and artificial signs, (wo)man is in the condition of semiotic perpetual motion. The quantity of information produced is greater than what is received. *Information-added* (to adapt here Marx's concept of value-added) is characteristic of human creativity. However seductive this image might be, it does not release us from the elementary obligation of scientific caution. It must always be pointed out that information-added, as exemplified by some scientific hypotheses, artistic images, or philosophical systems, is relative; that is, it stems either from the ability to generalize (which the senses do not directly have but which they acquire through *rationalization*, that is, through the system of memory that participates in the double articulation of speech) or the ability to abstract. It would be naive of us to believe that information can be produced from nothing; the same goes for meaning. Information-added is not the consequence of communication--the process in which what is transmitted remains relatively the same (affected of course by the mechanisms inherent in transmission)--but of signification. The relative autonomy of signs regarding objects begins together with the formation of meaning, continues with its achievement, and is brought to fulfillment (an inexhaustible process) in the retroaction that meaning exercises on the sign as such. The formation (constitution) of meaning is demonstrated by the diversity of languages as well as by the interpretant's (partial) ability to switch from one language to another (and, in the case of speech, from one tongue to another). The achievement of meaning cannot be understood without taking polysemy into account, the simultaneity representative of ideas (meanings) being historical proof that this must be true. Finally, the retroaction of meaning on sign (especially on the linguistic sign) is evidenced by the appearance of the second (phonematic) articulation. This must be understood within the semiotic field.

Meaning has an infralogical dimension (where differentiation takes place) and a logical dimension (where identification takes place). Identical ideas are thus constituted in different ways at the (relative) end of the signification processes. There is no meaning without sign, but the sign, as representamen, does not block the way of meaning toward logic; it represents the access to rational foundation. Signification presupposes a morality of meaning, that is, the need to keep signs near things, to maintain their connection, and to relate meaning not only to signs but also to the objects that those signs stand for. Peirce's ethical warning about the use of signs must be understood in this respect. The autonomy of

thought in relation to sign systems (especially the verbal sign) has as a fundamental consequence the retroaction of meaning on the sign (respectively significance on the significant, in de Saussure's semiology, one of the best known forms being polysemy. It can consequently be characterized as the condition of a sign (*word* in particular) in which a new idea is formed, If signs were to renew themselves at the rate at which ideas appear, especially in this epoch, we would live in an insupportable semiotic universe. The bombardment of new signs would bring about a decline from culture into nature and the need to adapt to signs as signals. Nevertheless, the universe of signs is actually in relative expansion. The axiom of signification- is precisely the transition from the finity of signs to the infinity of meanings, retroaction having the effect of optimization.

The sign expresses on the one hand and forms on the other; that is, it has a specific analytical force (any sign is the "resumé" of its object from a certain perspective) in opposition to the synthetic force that it develops. The sign ideally "re-creates" the object from the ideological perspective which it explicitly or implicitly represents. The myth generalizes individual experience (is a *sui generis* algorithm of human action), while art-sometimes utilizing similar signs-individualizes the general. The recourse is analytical in the first case and synthetic in the second. Certain sciences (or branches of science) are predominantly analytical (a fact expressed by the laws of mechanics, chemistry, zoological, typology, anatomy, etc.); others are synthetic (mathematics, *par excellence*). The mechanism of signification and the way in which its synthetic and analytical dimensions interact are evidenced in complex socio-cultural processes. Communication is represented by the semiotic processes of the recovery of information codified in signs and signification and by the processes of carrying out information-added (scientific, aesthetic, political, social, etc.), which is not always necessarily in connection to information *per se*. Signification is not only cognitive-rational, but also pragmatic-affective. *The final products of semioses are not signs but meanings in relation to signs* (cf. Wertsch, this volume). Interactions between (wo)man and the system of signs s/he participates in as an integral part have undergone enormous diversification through the course of history and promise to continue undergoing diversification. Therefore, under the condition of the intense semiotization of contemporary social and practical life, it is impossible to ignore the way this interaction takes place. The semiotic process of the formation of ideas is only one aspect of this interaction.

References

- Barthes, R. *L'empire de signes*. Geneva: Skira, 1970.
- Buytendijk, F.J. J. *L'homme et l'animal*. Paris: Gallimard, 1965.
- Elders, L. Les rapports de la langue et de la pensée japonaise. *Revue Philosophique de la France et de l'Etranger*, 1966, 3, 391-406.
- Hartmann, R. S. *Can field theory be applied to ethics?* Unpublished dissertation, Northwestern University, 1948.
- Hoermann, H. *Introduction a la psycholinguistique*. Paris: Larousse, 1972.
- Leroi-Gouthan, A. *Le geste et la parole* (Vol. I). Paris: Albin Michel, 1964.
- Lévi-Strauss, C. *La pensée sauvage*. Paris: Gallimard, 1962.
- Lewin, K. Field theory and experiment in social psychology: Concepts and methods. *American Journal of Sociology*, 1939, 44, 868-896.
- Marcuse, H. *One-dimensional man: Studies in the ideology of the advanced industrial society*. Boston: Beacon Press, 1964
- Martinet, A. Un ou deux phonèmes? *Acta Linguistica*, 1939, 1, 94-103.
- McLuhhan, M. *Understanding media*. New York McGraw-Hill, 1964.
- Nadin, M. The logic of vagueness and the category of synechism. *The Monist*. 1980,63(3), 352-3.
- Nadin, M. *Zeichen und Wert*. Tuebingen: Gunther Narr Verlag, 1981.
- Nadin, M. Consistency, completeness, and the meaning of sign theories: The semiotic field. *American Journal of Semiotics*, 1982, 2(3), 79-98.
- Peirce, C. S. *Collected papers* (C. Hartshorne & P. Weiss, Eds.). Cambridge, MA: The Belknap Press of Harvard University Press, 1960.
- Plato, *Dialogues* (B. Jowett, trans.). New York: Random House, 1937.
- Rossi-Landi, F. Signs and bodies. In S. Chatman, U. Eco, & J.-M. Klinkenberg (Eds.), *A semiotic landscape*. The Hague: Mouton, 1979, pp. 356-359.
- Skinner, B. F. *Verbal behavior*. New York Appleton, 1957.

Wald, H. La parole et la structure logique de la pens&. In S. Chatman, U. Eco, & J.-M. Klinkenberg (Eds.), *A semiotic landscape*. The Hague: Mouton, 1979, pp. 372-374.

Whorf, B. L. *Language, thought, and reality* (J. B. Carrol, Ed.). Cambridge, MA: MIT Press, 1963.