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The Dialogic Nature of Signs

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6.

Dialogism and Biosemiosis

Dialogism, modeling and communication in semiosis

Dialogue between interpreted and interpretant signs does not occur in physical phenomena or in nonbiological interactions, in short, in the inorganic world. This is because sign and semiosis presuppose the capacity for interpretation, and therefore the presence of a living being. According to Thomas A. Sebeok, semiosis is connected with the organic world: indeed, semiosis and life coincide. Making a dialogic reference to Sebeok’s doctrine of signs, in this fourth lecture we propose to investigate the interrelation between interpreted and interpretant in biosemiosis, and to do so in terms of ‘dialogism.’ In light of Sebeok’s biosemiotics, the concept of dialogism may be extended beyond the sphere of anthroposemiosis and applied to all communication processes, which are based not only on *modeling* (Sebeok), but also on *dialogism*. We believe that modeling and dialogism are at the basis of all communication processes. And recalling the importance of dialogue in Peirce’s thought, we also propose that our approach be viewed as an attempt to develop the Peircean matrix of biosemiotics.

After Sebeok semiotics has emerged as ‘global semiotics’. From a global semiotic perspective, signs and life coincide, in other words, where there is life there is semiosis.

A lire les ouvrages de Sebeok, on est confondu par sa familiarité avec les langues et les cultures du monde, par l’aisance avec laquelle il se meut à travers les travaux des psychologues, des spécialistes de neuro-physiologie cérébrale, de biologie cellulaire, ou ceux des éthologues portant sur des centaines d’espèces zoologiques allant des organismes unicellulaires aux mammifères supérieurs, en passant par les insectes, les

poissons et les oiseaux. Ce savoir plus qu'encyclopédique se mesure aussi aux milliers de noms d'auteurs, de langues, de peuples et d'espèces composant les index des ouvrages écrits ou dirigés par lui, et à leurs énormes bibliographies. (Lévi-Strauss, 'Avant-Propos,' in Bouissac, Herzfeld, Posner 1986: 3)

'Modeling' is a pivotal notion used in global semiotics to explain life and behaviour among living entities conceived in terms of semiosis. Therefore, global semiotics also involves modeling systems theory.

Modeling is the foundation of communication. Communication necessarily occurs within the limits of a world and its characteristics as modeled by a given species, a world that is species-specific. Jakob von Uexküll speaks of invisible worlds to indicate the domain which englobes all animals according to the species they belong to. What an animal perceives, craves, fears and predated is relative to its own world. Human communication is the most complex and varied form of communication in the sphere of biosemiosis – the human animal is capable of modeling a potentially infinite number of possible worlds. Sebeok develops the concept of modeling from the so-called Moscow-Tartu school, though he enriches it by relating it to the concept of *Umwelt* as formulated by Jakob von Uexküll (see Sebeok 1991: 49-58, 68-82, and 1994: 117-127).

The so-called Moscow-Tartu school (see Lucid 1977 and Rudy 1986) limits the concept of modeling to the human sphere (Lotman's 'semiosphere') and distinguishes between the 'primary modeling system,' an expression used to denote natural language, and the 'secondary modeling system,' used for all other human cultural systems. Instead, Sebeok extends the concept of model beyond the domain of anthroposemiosis, and connects it to the concept of *Umwelt* as elaborated by the biologist Jakob von Uexküll, which in Sebeok's interpretation may be translated as 'outside world model.'

On the basis of research in biosemiotics, we now know that the modeling capacity is operative in all life forms. All life forms are endowed with a capacity for semiosis, therefore the capacity to produce and comprehend the species-specific models of their worlds. Primary modeling is the innate capacity of organisms for simulative modeling in species-specific ways. The primary modeling system of the species *Homo* is *language*, which should not be confused with verbal language, as in the Moscow-Tartu school. A distinction must be made between language understood as 'verbal language,' that is, as a communication system, and 'language' understood as a species-specific modeling device.

Secondary and tertiary modeling systems presuppose language understood as a modeling device, therefore, these too indicate uniquely human capacities. In Sebeok's terminology, the secondary modeling system is verbal language or, *speech*, while tertiary modeling systems indicate all human cultural systems, symbol-based modeling processes grounded in language and speech. Sebeok's tripartite distinction is fundamental in order to distinguish between modeling and communication, as well as to demonstrate the foundational character of modeling with respect to communication.

On this point, an important contribution is also made by Thure von Uexküll with his own tripartite analysis of semiosis. However, as we shall see in what follows, Uexküll formulates his tripartition in the terminology of code semiotics (a mixture of Saussurean semiology and Shannon and Weaver's information theory) with his use of such terms as 'emitter' and 'receiver.' Instead we take Thure von Uexküll's terminology 'translating' it into the language of Peircean interpretation semiotics. This translative operation is pivotal in our own interpretation of the connection between modeling and dialogism.

Proceeding with Sebeok and beyond him, another indispensable argument for the relation between modeling and dialogism, viewed as the foundation of communication, is provided by the 'Functional Cycle,' as described by Jakob von Uexküll.

All these aspects are treated in what follows leading into our interpretation of dialogism as conceived by Bakhtin and its possible relation to Sebeok's biosemiotics.

Let us now examine some concepts anticipated in a previous lecture (see 2.2). In the article 'Biosemiosis' (in Posner, Robering, and Sebeok 1997-98, I: 447-456), Thure von Uexküll identifies three different kinds of semiosis, characterized by the different roles carried out by emitter and receiver. He calls these three different types of semiosis:

- 1) *semiosis of information or signification*;
- 2) *semiosis of symptomatization*;
- 3) *semiosis of communication*.

In *semiosis of information or signification*, we have an inanimate environment which acts as a 'quasi-emitter' without a semiotic function. The receiver, a living system or living entity, makes whatever it receives meaningful via its receptors and it must perform all semiotic functions.

In *semiosis of symptomatization*, the emitter is a living being that sends out signals through its behaviour or attitude. These signals are neither directed towards a receiver nor they attend an answer. The type of signals received by the receiver are signs called ‘symptoms.’

In *semiosis of communication*, signs are emitted for the receiver and must find the meaning intended by the emitter (see Posner, Robering, and Sebeok 1997-98, I: 449-450).

In our terminology, and in accordance with Peirce’s (but also with Thure von Uexküll’s) terminology, the three types of semiosis specified in terms of emitter and receiver and the different roles they carry out, may instead be reformulated in terms of the different roles carried out by the interpretant sign and the interpreted sign. According to this approach, we may state that:

1) The *interpreted* becomes a *sign* only because it receives an interpretation from the interpretant which is a response (*semiosis of information*); or

2) Before it is interpreted as a sign by the interpretant, the interpreted is already itself an interpretant response (*symptom*) which, however, is not intended to be interpreted as a sign (*semiosis of symptomatisation*);

3) Before being interpreted as a sign by the interpretant, the interpreted is already an interpretant response intended to be interpreted as a sign, in other words, the interpreted requires an interpretant response (*semiosis of communication*).

We believe that reformulation of Thure von Uexküll’s typology of semiosis in terms of the interpreted sign and the interpretant sign and the way they participate in interpretation, presents the following advantages over the conception of semiotic differences established on the basis of ‘emitter’ and ‘receiver’ participation:

a) The role of the interpretant in semiosis is emphasized;

b) The meaning of the expression ‘inanimate quasi-interpreter’ in *semiosis of information or signification* is explained as the ‘interpreted-non-interpretant’ (while in *semiosis of symptomatisation* the interpreted is an interpretant-interpreted which is not intended to be interpreted as a sign; and in *semiosis of communication* the interpreted is an interpretant-interpreted which is intended to be interpreted as a sign);

c) Semiosis is identified with the capacity for interpretation, that is to say, for response;

d) Importance of the pragmatic dimension in semiosis is confirmed;

e) Thure von Uexküll's definition of biosemiotics as '*interpretation of interpretation*' or in a word, '*metainterpretation*' is also confirmed and developed.

In our reformulation, we employ the same terminology used by Thure von Uexküll to describe his model of biosemiotics (see Posner, Robering, and Sebeok 1997-98, I: 456).

Semiosis of information or signification, semiosis of symptomatization, and semiosis of communication are grounded in specific types of modeling characteristics of specific life forms. The species capacity for modeling is the necessary a priori for processing and interpreting perceptual input species-specifically.

In *semiosis of information or signification* (Thure von Uexküll), where an inanimate environment acts as a 'quasi-emitter' — or, in our terminology, where the *interpreted* becomes a *sign* only because it receives an interpretation by the interpretant which is a response — receiver interpretation is dialogical. Dialogue also subsists in *semiosis of symptomatization* (Thure von Uexküll), where the interpreted too is an interpretant response (*symptom*) that, similarly to *semiosis of information or signification*, does not arise for the sake of being interpreted as a sign. Dialogue subsists also, obviously, in *semiosis of communication* (Thure von Uexküll) where the interpreted itself, before being interpreted as a sign by the interpretant is already an interpretant response calling for interpretation as a sign.

Jakob von Uexküll's 'functional cycle' is a model for semiotic processes. As such, it has a dialogic structure and involves inferences of the 'if...then' type which may even occur on a primitive level, as in Pavlovian semiosis or as prefigurements of the type of semiosis (where we have a 'quasi-mind' interpreter) taking place during cognitive inference.

In the 'functional cycle,' the interpretandum produced by the 'objective connecting structure' becomes an interpretatum and (represented in the organism by a signaling disposition) it is translated by the interpretant into a behavioural disposition which triggers a behaviour into the 'connecting structure.' Uexküll does not use a dialogic model. However, the point is that in the 'functional cycle' thus described, a dialogic relation is established between interpreted (interpretandum) and interpretant (interpreted by another interpretant, and so forth). The interpretant does not limit itself to identifying the interpreted, but rather establishes an interactive relationship with it.

Vice versa, not only does the 'functional cycle' have a dialogic structure, but dialogue in communication understood in a strict sense, may also be analyzed in the light of the 'functional

cycle.’ In other words, the dialogic communicative relationship between a sender who intends to communicate something about an object and a receiver may be considered, in turn, on the basis of the ‘functional cycle’ model. The type of dialogue discussed here corresponds to the processes described by the ‘functional cycle’ as presented, in Thure von Uexküll’s terminology, neither in *semiosis of information or signification*, nor in *semiosis of symptomatization*, but rather in *semiosis of communication*. In this case, the interpreted itself is already an interpretant response before it is interpreted as a sign by the interpretant, this interpreted is addressed to somebody to be identified and to receive the required *interpretant of answering comprehension*.

The *Handbook of Semiotics* by Winfried Nöth (1990) lacks the entry ‘Dialogue’. However, this term is listed in the ‘Index of subjects and terms,’ which informs us that this subject is treated in a chapter titled ‘Communication and semiosis’ (Part 3). Here the ‘functional cycle’ is also mentioned (see Nöth 1990: 176-180). This shows the implications of Uexküll’s biosemiotic ‘functional cycle’ concerning the relation between dialogue and communication. Different communication models are discussed in order to show how biological models (such as the models proposed by Maturana, Varela, and Thure von Uexküll) (according to which communication is self-referential, autopoietic and a semiotically closed system) are radically opposed both to the linear (Shannon and Weaver) and the circular (Saussure) paradigms. As reported by Nöth (1990: 180), Thure von Uexküll (1981: 14) demonstrates that Jakob von Uexküll’s biosemiotic functional cycle (1982: 8) is characterized by autonomous closure and therefore reacts to its environment only according to its internal needs.

The theory of autopoietic systems is incompatible with dialogism only if the latter is understood reductively in terms of a communication model describing communication as a linear causal process. This is a process moving from source to destination. Similarly, there is incompatibility between autopoietic systems and dialogism, when dialogue is conceived as based on the conversation model governed by the turning around together rule. Moreover, the autopoietic system calls for a new notion of creativity. Another question remains, the question of how the principle of autonomous closure is compatible with dialogue conceived as the inner structure of the individual, therefore with creativity and learning.

As Maturana (1978: 54-55) suggests, another form of dialogic exchange may be conceived. This is different from communication conceived as a linear process from source to destination, or as a circular process in which participants take turns in playing the part of sender

and receiver. The dialogic model conceived by Maturana may be described in terms of 'pre- or anticomunicative interaction.'