Is language a primary modeling system?
On Juri Lotman's concept of semiosphere

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Abstract. Juri Lotman's well-known distinction of primary modeling system versus secondary modeling system is a lasting legacy of his that has been adhered to, modified, and refuted by semioticians of culture and nature. Adherence aside, modifications and refutations have focused on the issue whether or not language is a primary modeling system, and, if not, what alternatives can be made available to replace it. As Sebeok would concur, for both biosemiosis and anthroposemiosis, language can only be a secondary modeling system on top of the biological experience of *Umwelt* or human sensory system. This paper proposes to explore the possibility of a "pre-verbal" modeling system suggested by Lotman's spatial concept of semio-sphere, and discuss its implications in cross-cultural dialogue.

The well-known distinction of primary modeling system versus secondary modeling system suggested by Lotman and others (Lotman 1977) is a lasting legacy of the Tartu School's that has been adhered to, modified, and refuted by semioticians of culture and nature (Sebeok 1991; 1994; Sebeok, Danesi 2000).[1] Adherence aside, modifications and refutations have focused on the issue whether or not language is a primary modeling system (hereinafter PMS) and, if not, what alterna-

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[1] It would be inaccurate to attribute this distinction to Lotman. Sebeok (1991: 49) identifies A. A. Zaliznjak, V. V. Ivanov, and V. N. Toporov (Zaliznjak *et al.* 1977 [1962]) as the original users of the terms in their joint paper for the Moscow-based Academy of Sciences. It must be noted, however, that Sebeok and Danesi do not explicitly make the PMS and SMS distinction; instead, they suggest the gradational and hierarchical relationships among strata, for example, a situation in which natural language mediates between the most abstract mathematical model and the least abstract but most connotated religious model (Zaliznjak *et al.* 1977: 47).

tive can be made available to replace it. For both biosemiosis and anthroposemiosis, language can only be a secondary modeling system (hereinafter SMS) on top of the biological experience of *Umwelt*. As Sebeok and Danesi have recently observed:

> language is, by definition, a secondary cohesive modeling system providing humans with the resources for extending primary forms ad infinitum. […] From a biosemiotic perspective, the language code can be defined as the cohesive system providing the modeling resources for converting what von Uexküll (1909) called 'concrete living existence' into 'active plans'. (Sebeok, Danesi 2000: 108)

Here they are reiterating Sebeok's entrenched position over the decades. He had observed in 1991, "Solely in the genus *Homo* have verbal signs emerged. To put it in another way, only hominids possess two mutually sustaining repertoires of signs, the zoosemiotic non-verbal, plus, superimposed, the anthroposemiotic verbal" (Sebeok 1991: 55). According to Sebeok, what the Russo-Estonian semioticians call "primary", i.e., the anthroposemiotic verbal, is "phylogenetically as well as ontogenetically secondary to the nonverbal; and, therefore, what they call 'secondary' is actually a further, tertiary augmentation of the former" (Sebeok 1991: 55). In anthroposemiosis the triadic relationship is "developmental" (Sebeok, Danesi 2000: 10) and can be displayed as follows.

> (1) Primary Modeling System (PMS) = the system that predisposes the human infant to engage in sense-based forms of modeling.
> (2) Secondary Modeling System (SMS) = the system that subsequently impels the child to engage in extensional and indexical forms of modeling.
> (3) Tertiary Modeling System (TMS) = the system that allows the maturing child to engage in highly abstract (symbol-based) forms of modeling. (Sebeok, Danesi 2000: 10)

In this more refined configuration, language as symbolic system is reduced (or elevated) to the still higher tertiary layer. This accepted, a cultural system with maximal modeling capacity like religion would be none other than a quartiary model (Zaliznjak *et al.* 1977 [1962]), still further removed from the biological foundation. Sebeok's argument against the Russo-Estonian semioticians can stand insofar as language is secondary to human sensory system, the appropriateness

of the Peircian terms being another question.[2] However, insofar as that sensory system or any other biological system is articulated and described in language, its a priority and transparency would be compromised and undermined. This is especially true to semiotics of culture, which is a major contribution of the Tartu School's.

Given the fact that language, as Emile Benveniste (1969) asserts, is the only semiotic system that can be at once both an interpreting and interpreted system, the primacy granted to object-language is replaced by the dialectic between object-language and meta-language.[3] This had already been observed by the joint authors of the "Theses", manifesto of the Tartu-Moscow School:

> The choice of a discrete metalanguage of distinctive features of the types upper-lower, left-right, dark-light, black-white, to describe such continuous texts as those of paintings or the cinema, may itself be regarded as a manifestation of archaizing tendencies which impose on the continuous text of the object-language metalinguistic categories more characteristic of archaic systems of binary symbolic classification (of mythological and ritual types). But we must not rule out the fact that features of this kind remain as archetypal features even during the creation and perception of continuous texts. (Lotman *et al.* 1975: 64)

The dating of this manifesto is important because only a few years later were Lotman and Uspensky (1978 [1971]) seen to criticize Benveniste's unqualified privileging language. Their criticism shows, from the perspective of linguistics or semiotics of language, a seemingly contradictory position which can be explained only by

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[2]   The triadic structure suggests Peirce. However, a number of questions can be raised. (1) Whilst the development from Firstness to Secondness and Thirdness is acceptable, only two rather than three types of sign are at work here, namely, the indexical and the symbolic. One wonders if the iconic does not have a role to play, especially with reference to the sign of sphere. (2) As far as the human sensory system is concerned, the fundamental and dominant sign that cuts across the three realms is the indexical. (3) In Peirce the triadic relationship of representamen, object, and interpretant is irreducible.

[3]   Lotman and Uspensky (1978: 212) allude to Benveniste (1969) to support their argument for the PMS versus SMS distinction. Whilst they agree with Benveniste on natural languages' metalingual capacity, they believe that, in actual historical functioning, "languages are inseparable from culture". To be sure, the distinction is only heuristic and by no means precludes inter-level or inter-systemic transcoding.

looking at Lotman historically, i.e., in terms of historicity. Since this is a key passage, it is worth quoting in length.

> A key question is the relationship of culture to natural language. In the preceding publications of Tartu University (the semiotic series), cultural phenomena were defined as secondary modeling systems, a term which indicated their derivational nature in relation to natural language. Many studies, following the Sapir-Whorf hypothesis, emphasized, and examined the influence of language on various manifestations of human culture. Recently [i.e., 1969] Benveniste has emphasized that only natural languages can fulfill a metalinguistic role and that, by virtue of this, they hold a distinct place in the system of human communication. *More questionable, however, is the author's proposal in the same article to consider only natural languages as strictly semiotic systems, defining all other cultural models as semantic, that is, not possessing their own systematic semiosis but borrowing it from the sphere of natural languages*. Even though it is valuable to contrast primary and secondary modeling systems (without such a contrast it is impossible to single out the distinguishing characteristics of each), it would be appropriate to stress here that in their actual historical functioning, languages are inseparable from culture. No language (in the full sense of the word) can exist unless it is steeped in the context of culture; and no culture can exist which does not have, as its center, the structure of natural language. (Lotman, Uspensky 1978: 212; emphasis mine — *H. C.*)

Several points in this passage merit our notice, and most of which recur here and there, some more developed than others, throughout Lotman's writings. Particularly relevant to this paper is the word sphere, which I shall dwell on later. The emphasized passage is quite puzzling. For now, one should examine closely the authors' position regarding language.

First of all, the authors agree with Benveniste that only language can be in itself both object-language and meta-language. This, however, should not be construed to mean that language is the only meta-semiotics, mathematics and logic being two other notable examples. As meta-language, language serves to model, describe, explain, and by so doing, impose its linguistic features, such as binarism, on the object it studies. As *homo loquens*, we verbalise other semiotic systems, in the same way that we, as *homo symbolicum*, configure such systems in mathematics and symbolic logic. By virtue of its double articulation, language is capable of mapping culture, i.e., articulating cultural phenomena as secondary modeling systems, as aptly demonstrated by Zaliznjak *et al.* (1977) on religion. The authors of the "Theses" actually lend their support to Benveniste when they assert that culture

is "a system of systems based in the final analysis on a natural language (this is implied in the term 'secondary modeling systems', which are contrasted with the 'primary system', that is to say, the natural language)" (Lotman *et al.* 1975: 76); and that "the analysis of Slavic cultures and languages may prove a convenient model for investigating the interlations between natural languages and secondary (superlinguistic) semiotic modeling systems" (Lotman *et al.* 1975: 78).

To return to their criticism of Benveniste, one may observe that the afore-said structural function of language as system by no means precludes the PMS's being affected reversely by the SMS, nor for that matter, language's being historicised. However, our defense of Benveniste may run the risk of missing the point of Lotman's attempt, albeit in its embryonic form, to propose an alternative model. The possibility of a pre-verbal or non-verbal modeling system suggested by Lotman is the semiosphere. What is significant about this model is its holistic approach as a remedy to the linguistic model's atomism. While early linguistics-based semiotics "moves from simple and clearly defined atomic elements to gradually more complicated elements", the semiosphere is "a semiotic continuum filled with semiotic structures of different types and with different levels of organization" (Lotman 1989: 42–43 [Russian 1984]). The semiosphere is arguably Lotman's major contribution in his later years. Presumably proposed in 1984, this latter conceptual category, even in Sebeok and Danesi's words, is so "pliable" and "adaptive" (Sebeok, Danesi 2000: 106) that one may wonder why it does not have the potential of serving as a PMS if the hierarchical order of "bottom-up" can be reversed to "top-down" (Alexandrov 2000: 343).

Two questions can be raised regarding semiosphere's semiotic functions: first, "Whether the semiosphere and language as modeling systems (PMS) are compatible?" second, "How does the semiosphere function heuristically?" Regarding the first question, one recalls that Lotman has defined the semiosphere as "the semiotic space necessary for the existence and functioning of languages, not the sum total of different languages"; and in a sense it "has a prior existence and is in constant interaction with languages [...]. Outside the semiosphere there can be neither communication, nor language" (Lotman 2001: 123–124).

I shall return to the relationship between semiosphere and language towards the latter part of the paper. I raised the first question in an e-

mail correspondence with Professor Mihhail Lotman. In his good reply, Mihhail Lotman comments,[4] "In my opinion, the concept of semiosphere is not in conflict with a language as primary-modelling system, if we approach language as well in so-to-say holistic perspective[;] contradiction evolves only if we treat semiosphere in holistic way, but language in atomistic way".[5] One may certainly look at language holistically, but one does not analyse it that way. This leads to the next question: How can the holistic model of semiosphere be cognitive and operational? This question is not only a fundamental one of semiosis but also one of hermeneutic circle involving the dialectic relationship between part and whole.[6]

Since the early stage of Tartu School, Lotman's writings have been highlighted by his favourite word of sphere — I say word rather than concept because this single word may stand for a whole spectrum of concepts. The word had recurred throughout his writings, until the writer coined the term *semiosphere* in 1984. It seems appropriate now to examine the very concept of sphere as a semiotic entity, because we are confronted with the complex semiotic problem of a single signifier closing on a dozen of signifieds as well as the semantic problem of a word pointing to a large number of referents and references. The word is so frequently used by Lotman that its semantic precision is often blurred. In fact, it was already used as early as in the "Theses" and used together with the concept of language as PMS though their relationship was then not clear. But even there in the "Theses", the word *sphere* seems to be dominating. I have prepared a provisional list enumerating its various instances of usage in English translation. They

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[4]   In an e-mail correspondence with the author, dated December 11, 2001.

[5]   Apparently, in the time-honoured conflict between reductionists and anti-reductionists, J. Lotman aligns himself with the antireductionists in the belief that the whole is predominant rather than the part (cf. Prigogine, Stengers 1984: 173). Lotman once criticises the analytical tradition initiated by Descartes to the effect that "for this procedure [i.e., 'isolating an object and then making it into a general model'] to be a correct one, the isolated fact must be able to model all the qualities of the phenomenon on to which the conclusions are being extrapolated" (Lotman 2001: 123).

[6]   Alexandrov points out that in his earlier writings "Lotman's methodology entailed a systematic and hierarchical accumulation of data ranging from sound repetitions to broad ideological formulations and never dissolved an individual work's *sui generis* patterns of meaning in larger considerations such as ideology, genre, or period" (Alexandrov 2000: 343).

are not arranged according to the chronological order, nor do they show necessary evolution.

(1) As space

(a) "from this point of view [the functional correlation of different sign systems] particular importance is attached to questions of the hierarchical structure of the languages of culture, of the distribution of spheres among them, of cases in which these spheres intersect or merely border upon each other" (Lotman *et al*. 1975: 57);

(b) "culture will have the appearance of a certain delimited sphere" (ibid.: 57);

(c) "the sphere of organization (information) in human society" (ibid.: 58);

(d) "the sphere of cultural organization" (ibid.: 58);

(e) "the sphere of extracultural nonorganization" (ibid.: 58);

(f) "culture and non-culture appear as spheres" (ibid.: 58);

(g) "the spheres of the unconscious" (ibid.: 59);

(h) "the tension between the corresponding cultural spheres" (ibid.: 61);

(i) "mutual breaches of the cultural sphere into chaos and of chaos into the cultural sphere" (ibid.: 61);

(j) "different spheres of culture have inherent in them a different extent of internal organization" (ibid.: 82);

(k) "culture [...] forms [...] a marked-off sphere" (Lotman, Uspensky 1978: 211);

(l) "the space of the semiosphere is abstract in nature" (Lotman 1989: 43);

(m) "it is a specific sphere, with the same attributes that are ascribed to a closed sphere" (ibid.: 43).

(2) As system [of signs]

(n) by inference, "culture appears as a system of signs" (Lotman, Uspensky 1978: 211);

(o) "the sphere of natural languages" (ibid.: 212);

(p) "a semiosphere" can be defined as "the semiotic space necessary for the existence and functioning of languages" (Lotman 2001: 123).

(3) As geographical place

(q) "the function of myth [...] is [...] to establish identity between different spheres" (ibid.: 152);

(r) "when the semiosphere involves real territorial features as well, the boundary is spatial in the literal sense" (ibid.: 140).

(4) As collection of texts

(s) "if we take the central and peripheral spheres of culture to be texts organized in a particular way, then we shall notice that these texts have different types of internal organization" (ibid.: 162).

(5) As academic discipline

(t) "the dispute between the causal-predetermined and the probability theories in theoretical physics of this century is an example of the conflict we have been discussing in the sphere of science" (ibid.: 163).

(6) As conceptual category

    (u) "so if dialogism is the penetration of the diversity of life into the ordered sphere of theory, at the same time mythologism penetrates into the sphere of the extraordinary" (ibid.: 167).

(7) As genre

    (v) "the sphere of the detective story" (ibid.: 164).

(8) As geometrical figure

    (w) "in the light of Pythagorean ideas about the perfection of the circle and the sphere among geometrical figures and bodies, we can explain the circular construction of Hell as follows: the circle is the image of perfection" (ibid.: 181).

(9) As celestial body [in Dante]

    (x) "'after the boundary the poet ascends the mountain of Purgatory and is carried up through the heavenly spheres'" (quoted from Pavel Florensky; ibid.: 178).

(10) As Hell [in Dante]

    (y) "for it is not the centre of the sphere but the top of the Axis that is his [Dante's] point of spatial and ethico-religious orientation" (ibid.: 182).

(11) As cerebral division, i.e., hemisphere

    (z) "to our surprise, observations about the bipolar asymmetry of semiotic mechanisms has been paralleled by research into the functional asymmetry of the large hemispheres of the brain" (ibid.: 2–3).

The list is not exhaustive, but the present one is enough to reveal the semantic flexibility of the concept. The first thing we notice is that all the eleven classes listed are conceptual categories, and for that matter, super-ordinate categories rather than basic-level categories that need the mediation of bodily experiences (Lakoff, Johnson 1999: 26–27). The next thing worth notice is that as "spatial-relations concepts" (Lakoff, Johnson 1999: 30), they cannot be perceived, but are rather conceptualised by our projection of a large amount of complex imagistic structure unto a scene. The only invariable element that helps to construct such structure is perhaps the simple circle which is but an image-schema, the so-called "container schema", with the attributes of inside, outside, and boundary (Lakoff, Johnson 1999: 31–32).[7] But does this container schema, this iconic sign have such an extensive semantic power? The answer may be negative unless, with Peirce and his devout followers, iconicity can be granted a preliminary function in the holistic web of semiosis (Merrell 1991: 248; Spinks 1991: 444).

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[7]   Strikingly, the two schemata identified by Lakoff and Johnson (1999: 31–34), container schema logic and source-path-goal schema, are exactly the two models used by Lotman, viz. sphere and communication or information transmission.

Lotman's sources of the term sphere are quite heterogeneous. One is reminded of the word used by the Formalists and their followers. Vladimir Propp (1928), for one, proposes seven "spheres" of action which can accommodate the thirty-one functions of the kernel Russian fairy tale. Lotman occasionally uses sphere in this Proppian sense, e.g., "[A] plot-space is divided by one boundary into an internal and an external sphere, and one character has the plot-possibility of crossing that boundary" (Lotman 2001: 157).

As is well-known now, Lotman has derived his semiosphere from Vladimir Ivanovich Vernadsky's *biosphere* and *noosphere* (2001: 123, 125), and their rapport has received much critical attention recently (Kull 1998; 1999; Mandelker 1994; 1995; Mikulinsky 1984; Samson, Pitt 1999; Alexandrov 2000; M. Lotman 2001). Not a Slavist nor biologist by training, I have benefited from these studies, and in particular, am personally indebted to Professor Kull for his correspondence regarding the Lotman-Vernadsky links and the research he has done.[8] From the perspective of influence study, the possible rapports between Vernadsky and Lotman and between Jakob von Uexküll and Lotman would be worthy topics for further enquiry. Let it suffice to make the following brief comment.

As a closed geometrical figure or form, whether regular or irregular, symmetrical or asymmetrical, the sphere is a semiotic construct. Because of the long tradition of usage where it iconically stands for celestial bodies, including the Earth, and the popular references to the components of geosphere, viz. lithosphere, hydrosphere, and atmosphere, one tends to take what it stands for as empirical facts, and confuse genesis with metagenesis (Koch 1991: 214), or, in Popper's words, world-1 with world-3 knowledge.[9] Such is the case of biosphere. Lotman comments on Vernadsky's terms,

> We should caution against confusing the term noosphere, introduced by V. I. Vernadskii, with the concept of semiosphere, which is our contribution. The noosphere is a specific stage in the development of the biosphere, a stage associated with the rational activity of man [...]. The noosphere is formed

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8   E-mail correspondence with the author, dated 16 January 16, 2002.
9   According to Koch, there is a "mirror-like difference" between genetic and metagenetic evolution. While genesis proceeds "from the general primum (e.g. atom) to a genetical secundum (e.g. molecule)", metagenesis "proceeds, in its process of the neural reflection of the outward world, from what is, in the eyes of overall evolution and genesis, posterior (e.g. the human body) to what is prior (e.g. geographical landscape, mountains)" (Koch 1991: 214).

when human reason acquires a dominant role in this process. Whereas the noosphere has a material and spatial existence that embraces part of our planet, the space of the semiosphere is abstract in nature. However, this by no means implies that the concept of space is used here in a metaphorical sense. It is a specific sphere, with the same attributes that are ascribed to a closed space. (Lotman 1989: 43)

Let us put aside Lotman's rather arbitrary assertion that the noosphere is material and the semiosphere abstract (but "specific" [Sic!]) as well as his curious argument that no metaphor is being used for his concept of space — our list above proves the contrary. The point is that not only is the noosphere a semiotic construct, like the semiosphere, but also is the biosphere or geosphere a construct. The only difference is that one tends to verify or falsify the other empirically a priori spheres by scientific observations and experiments, whereas one may not verify or falsify noosphere and semiosphere with the same methods. In fact, from our point of view, both noosphere and semiosphere take semiotics to construct and thus contribute to the so-called world-3 knowledge.

Before moving to the next topic of semiosphere as model, let me conclude this discussion by quoting Mihhail Lotman's well-balanced observation which he made in Taiwan in 2001:

The relationship between semiosphere and biosphere is the relationship between two possible worlds. They exist, so to say, in parallel: while biosphere is formed in accordance with laws of science (physics, biology, etc.), which is the realm of time and causality, [the] semiosphere is formed by means of semiotic mechanisms. (M. Lotman 2001: 100)

With the problematic of the two kinds of sphere's parallelism or convergence bracketed, I would return to the topic of language, which, I believe, constitutes what Mihhail Lotman means by "semiotic mechanisms".

We could agree with Lotman that the sphere, as micro-structure, is an icon (What else can it be?) and when temporalised, that is, from the macro-structural perspective, the dynamic, evolutionary semiosphere, together with the biosphere and noosphere, may be conceptualised, i.e., via the secondary indexisation and tertiary symbolisation, as an iconic continuum. In its most abstract form, i.e., as the micro-structure circle, the sphere no doubt conforms to what Sebeok and Danesi mean by model: "[A] form that has been imagined or made externally (through some physical medium) to stand for an object, event, feeling,

etc., known as a referent, or for a class of similar (or related) objects, events, feelings, etc., known as referential domain" (Sebeok, Danesi 2000: 2). This iconic sign may indeed in some aspect stand for something to someone. But when the icon is taken too literally, i.e., resembling a circle, and its iconicity too metaphorically, i.e., any kind of delimited space, so that it can be generalised as a master-sign that claims to embrace and subsume all the cultural and natural phenomena, then it loses its function and attraction as a model and fails to serve as a discovery procedure. This may have been what has happened to some generalisations of Peircian universe of the mind. Now among the items listed above, it is dubious if they can be grouped as referential domain precisely because the expression seems to be capable of content (i.e., reference) free.[10] Whereas a Peircian would regard every thought-sign iconic and therefore the human mind an infinite semiosis of iconicity, that is, "a continuous extension in space" (Peirce, CP 6.277); others have cautioned against using extending space as a semiotic model. Greimas and Courtés, for one, have this to say: "When all the different metaphorical uses of this word [space] are added together, one can see that the use of the term space requires great prudence on the semiotician's part" (Greimas, Courtés 1982: 305).

We recall Lotman has designated the semiosphere as pre-requisite to language, a prior space only on which can language communication be enacted. From the perspective of mereology, the universe of semiosphere is indeed larger than that of language. However, qua model, the semiosphere is confronted with a dilemma: On the one hand, it has to be a "minimalist" abstraction (Merrell 1998: 153), the condition of which may be fulfilled by the iconic sphere; on the other, it should function to "constitute an entire system dictating semantic rules" and to provide "both descriptive and explanatory adequacy for a successful theory" (Merrell 1991: 257).[11] How does one get across

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[10]   Much has been discussed about iconicity as modeling. In addition to diagrams, maps, metaphors, and images, almost ever instance of representation of human thinking is iconic in its firstness. See, for example, Spinks (1991).

[11]   Floyd Merrell, in commenting on Ernest H. Hutten's concept of model, has this to say: "A model specifies the meaning of an entire theoretical corpus. It prescribes a context and provides a universe of discourse, setting the very limits to what can and cannot be said, thus establishing a theory's content and the logical range of the propositions. Moreover, a model, in addition to its metaphorical character, is not limited to a single expression, or even to a series of expressions.

this dilemma, or in Mihhail Lotman's phrase, the paradoxes of semio-sphere (2001)?

Following Mihhail Lotman, one could suggest that the semio-sphere is a holistic world model, one of metagenesis, in connection with which semiotics serves a metadiscipline (Koch 1991). By pro-posing this alternative we can hope to solve the afore-mentioned problem of semantic imprecision and semiotic border-crossings. When one assumes this holistic perspective (if possible at all!), inter-systemic intricacies and mechanisms of system mutations often retreat or even vanish from the horizon of perception.

As our preliminary list of the dozen categories (semantic areas) suggests, the semiosphere as world model provides ample space for the practice and interaction of multiple semiotic systems. However these categories can be grouped in different orders, whether as genre, collection of texts, or academic discipline, they belong to the discursive structure within the framework of subject and object relation, that is, the human subject's appellation and/or interpretation of supposedly extra-linguistic referents or contexts. In other words, linguistic semiosis (signification and communication) is always already there. Whereas natural languages are capable of making abstract semantic categories explicit — this is also seen in "the sphere of the detective story", some of the semiotic systems identified by Lotman, such as the sphere of the "extraordinary", are noted only for their semantic implicitness.

One final word about the use of semiosphere from the cross-cultural perspective. Among the cultural mechanisms which Lotman and his colleagues have identified (M. Lotman 2001), dialogue and translation figure prominently. With Lotman, dialogue as well as translation, in their continued process of emission and transmission of energy, can be enacted not only between historical periods of one culture, but also between inter-cultural and cross-cultural systems. A profound semiotician and cultural historian, Lotman will continue to shed light on our discipline of comparative culture with his insight into the possibility of intercultural dialogue. With this high tribute I beg to conclude my paper.

It constitutes an entire system dictating semantic rules for future propositions. The system, so to speak, provides for both descriptive and explanatory adequacy for a successful theory. In short, a model functions as if it were an exceedingly complex and systematic metaphor, or, in a manner of speaking, an allegory" (Merrell 1991: 257).

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Является ли язык первичной моделирующей системой? О понятии семиосферы у Юрия Лотмана

Широко известное лотмановское разделение на первичные и вторичные моделирующие системы надолго стало "ярлыком" для того, к чему это "приклеивалось", подвергаясь модификации и опровержению со стороны семиотиков культуры и природы. Как приверженцы этой теории, так и пытающиеся ее модифицировать или опровергнуть, фокусировались на вопросе, является ли язык первичной моделирующей системой, и если нет, то какая альтернатива могла бы занять это место. Как предложил Томас Себеок (для биосемиозиса и для антропосемиозиса), язык может быть только вторичной моделирующей системой, надстраивающейся над биологическим опытом умвельта или человеческой сенсорной системы. Данная статья предлагает исследовать возможность выделения "довербальной" моделирующей системы, исходя из лотмановского понятия семиосферы, и обсудить ее возможные применения в межкультурном диалоге.

Kas keel on esmane modelleeriv süsteem? Juri Lotmani mõistest 'semiosfäär'

Juri Lotmani tuntud dihhotoomia — primaarne modelleeriv süsteem vs sekundaarne modelleeriv süsteem — on pikka aega hoidnud ärevil semiootikute meeli. Nii selle teooria pooldajad, modifitseerijad kui ka eitajad keskenduvad seejuures põhiküsimusele: kas keel on primaarne modelleeriv süsteem? Ja kui ei ole, siis mis võiks seda kohta täita? Thomas Sebeok pakkus välja nii antropo- kui biosemioosi ühendades, et keel võib olla vaid sekundaarne modelleeriv süsteem, järgnedes omailma või inimese sensoorse süsteemi bioloogilisele kogemusele. Artiklis pakutakse välja J. Lotmani semiosfääri mõistest lähtuv "eelverbaalne" modelleeriv süsteem, ja arutletakse selle võimalikke implikatsioone kultuuridevahelises dialoogis.