

Lotman's scientific investigatory boldness: The semiosphere as a critical theory of communication in culture

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Abstract. The main focus of this article is the analysis of the concept of semiosphere as it has emerged from the conception of culture as information — instead of describing the transmission of messages from A to B, it is based on the general process of meaning generation. Following Lotman's criticism on the paradoxes in communication and its theoretical domain, the article confronts the paradoxical concepts on: (1) the concept of message transmission from the addresser to addressee; (2) the notion of isolated processing systems; (3) the idea that culture speaks a unique language. From the standpoint of the semiosphere, the new object for studying such controversies could be found in the concept of text. When text is taken at the centre of the analysis of culture, nothing appears in an isolated fashion. Lotman's thinking does not fear the new hypothesis in proposing the conceptual domain of semiosphere to the scientific study of culture.

Our literary scholarship holds great possibilities: we have many serious and talented literary scholars, including young ones, and we have high scholarly traditions that have developed both in the past [...]. But in spite of all this, it seems to me that our recent literary scholarship (from essentially almost all of the past decade) is, in general, neither realizing these possibilities

nor satisfying our legitimate demands. There is no bold statement of general problems, no discoveries of new areas or significant individual phenomena in the boundless world of literature: there is no real, healthy struggle among scholarly trends. A certain fear of the investigatory risk, a fear of hypotheses, prevails. Literary scholarship is still essentially a young science. Its methods have not been developed and tested through experience, as have those of the natural sciences; thus, the absence of a struggle of trends and the fear of bold hypotheses inevitably lead to a predominance of truisms and stock phrases. Unfortunately, we have no shortage of them.

[...]

As concerns my own evaluation of prospects for the development of our literary scholarship, I think they are quite good in view of our immense potential. We lack only scholarly, investigatory boldness, and without this we cannot rise to the heights or descend to the depths.

(Mikhail M. Bakhtin 1996: 1, 7).

Introduction

Since the text, not culture, defines the foundations and assumptions of semiotics of culture studies, the activity of cultural semiosis appears as “the ensemble of semiotic formations” (Lotman, J. 2005: 218), in which a set of interactions transforms information toward organized sign systems. Namely, information becomes text. If the information interchanges are at the heart of the cultural semiosis, the text generation process is nothing but the essence of culture. Such line of reasoning leads Juri Lotman’s investigation on the dynamics of semiotic space, not as a place

of sending and receiving information. Semiotic space emerges inside the experiences of transforming information into sign systems.

Being at the core of the semiotics of culture, information processes and transformation define the semiotic space where semiosis raises. Transforming, not transmitting information leads Lotman's semiotic investigation to the depths of communication in cultural relationships. The concept of text has surged as a new object for semiotics studies that Lotman's attempts undoubtedly enlighten.

From the very beginning, the concept of text has been taken at the core of the semiotic studies on culture. Text not only builds the foundation of modern semiotics. The methodological centrality of text supports the collaborative scientific project *Theses on the Semiotic Study of Cultures* (Ivanov *et al.* 1998: 38). Even more important would be the notion of the cultural mechanism of transforming information into text. Here the meaning generating process emerges from the transformation itself. If at further sequence of thoughts Lotman had not accomplished the semiosphere, we should call it simply semiosis.

Although Lotman introduced the concept of semiosphere for the first time in 1984¹, the understanding of transforming information inside a semiotic space had been carefully considered on different occasions in his studies. The improvements in the understanding of transforming information into meaning generation processes open up the most challenging conception: "The semiosphere is that same semiotic space, outside of which semiosis itself cannot exist" (Lotman, J. 2005: 208). Ever since, the semiotic investigation of culture claims new methodological hypothesis introduced by semiosphere.

¹ The first edition of *О семиосфере* (On the semiosphere) appeared in Russian in 1984 in *Труды по знаковым системам* (*Sign Systems Studies*). In 1985, Lotman published an Italian book (Lotman 1985) in which the ideas on the semiosphere were discussed from the perspective of dialogic asymmetry. In Lotman 1990, the concept of semiosphere was presented in the English edition in which he conceived the notion of semiotic space as the mind of culture and as a place of autocommunicative processes. Each publication follows a different way of focusing on the semiotic interconnection of the cultural sign systems.

Rather than introducing a new term to semiotic studies, Lotman's conception affords a new perspective to see the world of culture and to interact with the information transformed into sign systems, and texts. There are new questions looking for new answers. How do signs meet each other and bring new ways of understanding the world into existence? Or before this, how people, creatures, life itself could be considered as sign systems of culture like languages are? How do sign systems relate with one another in the larger sphere of the lifeworld? How do they develop and survive conflicts? At least, how communication embodies the entire process of transforming information into signs in the universe of culture?

Semiotics of culture and Lotman's studies tried not to give us precise answers but to lead us to the world perception where "we are both a part and a likeness of a vast intellectual mechanism", as he wrote on the last page of his *Universe of the Mind* (Lotman, J. 1990: 273). What he said about the book, can be said about his conceptions. Both are "an attempt to raise these questions and the answer to them in the creation of a general and historical semiotics of culture" (Lotman, J. 1990: 273).

Mastery of the questions given above is full of challenging ideas, and Lotman discussed them not without accepting their paradoxicality.

The purpose of this essay is to understand Lotman's formulations on the paradoxes of communication and information theory as an important step to semiosphere's epistemological and methodological concerns. It is high time to put in the right place the paradoxical scientific formulation of communication that did not consider the transforming dimension of information, as well as the semiotic space and semiosis itself. But this is just one of the paradoxes supporting so many others.

Lotman's investigatory boldness would not even be noticed if he had not dealt with the paradoxes of a theory enshrined as the scientific paradigmatic construction of the twentieth century.

General hypothesis for a scientific semiotic study of culture

Following the path of the geochemist Vladimir I. Vernadsky (1863–1945) on the biosphere as the place where life itself is possible, Lotman brought up the semiosphere as a semiotic space where sign systems interrelate among them. Nevertheless, semiosphere is not even part of the biosphere in terms of its internal operation. Namely, “the constituents of the semiosphere are not necessarily time and causality, semiotic space can be formed not by mechanisms acquired from physical world, but by mechanisms specific to sign systems” (Lotman, M. 2001: 100)². The mechanisms of transforming information into text and of modelling sign systems into languages of culture do not exist as physical but only inside semiotic space.

Despite the importance of such inspired terminology, in fact, Lotman was overwhelmed by Vernadsky’s specific notion on the movement of the biosphere in which life generates life. In a letter to Boris Uspenskij a sort of confession on this can be read: “I am reading Vernadsky and [...] I am stunned by one of his statements. [...] I find Vernadsky’s thought, deeply founded on the experience of exploring cosmic geology, that life can arise only from living, i.e. that it is preceded by life” (cited in Kull 2005: 178). Lotman’s hypothesis on text inside the text, and text which precedes texts became a scientific standpoint not only

² I would like to go a little further on the distinction between biosphere and semiosphere, enforcing the idea of semiosphere as semiotic space outside biology. As Mihhail Lotman asserts, “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, semiosphere is formed by means of semiotic mechanisms. [...] But if Thomas Sebeok and other critics of the conception of semiosphere regarded it as part of biosphere, and consequently semiotics as belonging to the field of biology, then in my opinion the situation is just the opposite: biosphere itself is not natural but semiotic object. Here we should draw attention to the conception of Jakob von Uexküll, which differs from Vernadsky’s biosphere precisely by having a semiotic essence, not biological” (Lotman, M. 2001: 100).

to be discussed but also to be taken as a paradigmatic expression of what is specific to semiotics.

“Text in text” defines the movement of semiosphere as well as the methodological orientation to study interrelations between sign systems, as Lotman and Ivanov observed on film studies (Lotman, J. 1996: 91–109; Ivanov 1998: 18–32). Text fills the essential feature of the meaning generation movement because of its dialogic condition. Since “[d]ialogue becomes one of the most central mechanism of culture” (Lotman, M. 2001: 103), text comes up as the dialogic space of interrelations.

It will not be difficult to understand the dialogic encounter of cultures and the interrelations of different sign systems as the gateway to the study of the semiosphere. The dialogic encounter is understood as a mechanism of sign production generated by codes, languages and their further transformations in cultural systems. If the dialogic encounter of sign systems is taken as cultural translational process, we face a new problem for the semiotic study of culture, and the semiosphere is presented as the intellectual device for analyzing them.

There is no doubt that a new object like the semiosphere requires a daring observer ready to propose daring thoughts. This was the role of Juri Lotman.

I do believe that Lotman’s scientific investigatory boldness has conceived the semiosphere as a field in which semiotic investigation can “rise to the heights or descend to the depths”, in the analysis of the sign systems of culture, requested by M. Bakhtin (1996: 7). Lotman’s semiosphere not only provides a dialogic response to the question raised by M. Bakhtin but it also has overtaken the limitations of Bakhtin’s theoretical approach. The conceptual field of the semiosphere does not consider culture from the perspective of literature or linguistics based on the verbal world. According to Lotman, sign systems of culture can “speak” so many languages as cultural codes are able to construct. There is no fear in formulating hypotheses like that of text, polyglotism, and of the mind of culture.

The concept of the mind of culture needs to be considered first before delving deeper into Lotman’s ambitious ideas. For now it should be said

that the mind of culture is related to meaning generating information embodied in some sign systems' organization, or texts of culture. As a mechanism of meaning generation, semiosis functions like the mind, not of the individual, but of the culture. As a phenomenon of mind, semiosis not only creates codes and languages of culture, but also the recoding process of translating languages. So, the entire culture functions like an organism, or simply "mind".

In this case, *Universe of the Mind* (Lotman, J. 1990) is not only the title of a daring work, but also the conceptual metaphor of semiosis itself. Accordingly, Lotman formulates the notion of culture as a thinking mechanism, endowed, therefore, with intelligence and memory. As a thinking mechanism that transforms information into text, culture is a space of mind for the production of semiosis in which the mechanisms of transformation and transmutation of energy generate new information identified as intelligent action.

Culture as a thinking device; semiosis as an intelligent, productive action: these are the essential issues in studying the semiosphere that I will now consider. These are Lotman's hypotheses for a scientific semiotic study of culture as we I will try to demonstrate.

The awareness of the semiosphere as a cognitive domain of signification demands of the researcher the same bold methodological enterprise. He or she cannot be afraid of the new hypotheses of understanding culture. In respect to this, Lotman has not hesitated to criticize, for example, the old Shannon and Weaver's diagram on the transmission of messages, still alive in contemporary communication studies. His general criticism is no less disturbing: he does not recognize communication as a message transmission device. According to Lotman (1985: 51), we can only recognize communication as message transmission if we admit that the whole process of interaction between codes, languages, and systems works to produce new information. Consequently, information is not a unit of measurement defined by the code. The assumption of the code as the singular unit in whatever sign system is a paradox to be carefully examined.

In order to understand the coherence of the scientific assumptions developed by Lotman, it is necessary to cast doubt on the transposition of concepts, theories and knowledge whose foundations are not based on the movement of unpredictability. So this article is an attempt to chase Lotman's scientific investigatory boldness which has discovered semiosphere as a critical perspective for the semiotic study of culture.

From the semiotics of communication to the semiotics of culture

When text emerges as the central concept of the semiotics of culture, the general theory on communication loses its condition as the spokesman of transmission studies. The uniqueness in dealing with communication model, code, and transmission itself composes the most polemical of Lotman's inquiries. Instead of uniqueness, Lotman achieves modelling systems, codes of analyses and codes of synthesis, interpretation, and memory. In its functioning, culture operates through communication, transmission, and creation of new information. Cultural texts operate as an intelligent device.

The conception of culture as an intelligent³ relationship among systems requires a deep understanding of the interaction among different fields, namely codes and languages in the process of generating information. System interactions establish two different processes in the constitution of the semiosphere: the processing of information⁴ and the emergence of semiosis in the continuum of space-time relationships.

³ Intelligence is used in Lotman's semiotic meaning of textual transmission; of creating new information, and of memory for preserving texts (Lotman 1990: 2).

⁴ I do not think that Lotman understands information as a unit of measurement conceptualized by the theory of information and communication. According to the formulations presented in *The Structure of the Artistic Text* (Lotman 1978), information is related to messages diffused in the cosmos that still do not constitute language, previous, therefore, to the conventionality of the code.

These two processes not only articulate information and culture but also show how the universe of the mind functions to produce significant complex systems, that is, codes and languages. Therefore, understanding the semiosphere requires a metalinguistic exercise of thought (production of knowledge) about thought (functioning of the system). This is a genuinely semiotic work since, in order to talk about language, language is essential, just as the sign, in order to be made explicit, must resort to another sign.

Thinking mechanisms represents an achievement of metacriticism. The conceptual body is not given *a priori* to the researcher but requires some critical devices that lead to reorganizing ideas, concepts and operations. This theoretical reorganization requires a review of Lotman's inquiry of well-known communication theory based on transmission. This was the preliminary challenge faced by Lotman.

Since his early studies on semiosphere, Lotman brought to light the distinction between semiotics of culture and semiotics of communication. They should not be taken to be the same without the risk of eliminating the processes of semiosis. Lotman observes cultural orientation towards diversity of languages and sign systems, polyglotism and heteroglossia⁵ as main remarkable features of culture. Although transmission of information is the common problem to both communication and culture theories, two different conceptional fields evolved. Lotman's understanding of information should not be taken as a mere application of the discoveries of Claude Shannon.

Needless to say, the mathematical theory of communication, developed by Claude Shannon and augmented by Warren Weaver, is a praiseworthy scientific achievement of the last century. And Lotman never ignored that. When proposing information as the measurement unit, Shannon has left an indelible mark in the scientific thinking in different fields, from cybernetics to human and life sciences. In biology

⁵ Heteroglossia, like semiosphere, is an invented word through which M. Bakhtin (1981) expresses the multiaccentuality of speech in the novel. Not only social life but time, and the representation of the space of dialogical process and utterances are considered.

it presented the need to organize, in an objective manner, knowledge of the code and the transmission process of genetic information. A transformative stage occurred in the ways of seeing life. In this case, the transmission of signals has supported the emergence of structures of great complexity.

We do recognize the scientific importance of the concept of information as a measurement unit as a scientific statement. However, although the theory is evidently a remarkable theory, it should not be taken as the only side of the issue.

Unfortunately, the semiotic standard of complexity was not properly considered in the studies of communication in culture. The elementary operation of the system, namely the signals transmitting patterns on a straightforward transportation from A to B, has been spread to the entire theoretical body of communication processes and systems. Nevertheless, it should not be forgotten that machine codes are mathematical operations. By contrast, communication codes are structured languages and they function as a system of meaning generation. The distinction between codes in machine operation and codes engendered in process of signification throughout language cannot be confused.

Despite the revolution in different sciences, Lotman was unsure about the legitimacy of the impact that the concept of transmitting information has on culture, especially when considered from the standpoint of the mathematical operations' codes. Cultural semiosis should not be compared with the signal transmission simply because it is moving in different directions, in time and space. The spatial diagram has imposed a model of transmission that enables, at best, the expression of a very general semiotics of communication as the transmission of signals like those in the mechanism of electrical machine circuits. It cannot support, however, the semiosis of culture in its code-generating diversity, in its potential capacity of translation and transmutation, therefore, in its dialogic heteroglossia. Monological process of mathematical signals cannot be compared to the dialogical process of meaning generation. It should not be forgotten that while the machine system has to be efficient, the communication system has

to be meaningful. Only meaningful processes are capable of producing interaction and translation.

What Shannon initially called communication was the displacement of informational units. The dislocation of signals in a fixed path was totally free of modification in its route. The possibility of disturbances or noise itself had been predicted by the machine's operating system, and it was able to stop any sort of interference (Lotman 1985: 50; Lotman 1990: 9–120).

Lotman's criticism of Shannon's model started by considering not only the impossibility of such single and isolated operation, but also the cultural diversity of sign systems, codes, and language processes. Within an isolated operating system based on transmission, the communication analysis inside culture is simply not conceivable. Beyond the mere transmission of messages by signals, there is the transformation of codes that takes place in the same process, not of transmission, but of interaction, that is, coding-decoding-recoding. Here the communication process is focused on another level of performance: on the level of translation. It is about a dialogic circuit that considers neither the transportation nor the transmission, but the transmutation of the sign's creative energies — something like the performance of the poetic function. When Lotman assumed the paradigm of transformation, he was no longer talking about the semiotics of the communication arising from the spatial diagram. He was considering the semiotics of culture as a different approach to communication. In the system of culture, communication should be seen as a text that requires historical interconnections.

Lotman distinguished between two different but complementary trends in communication studies: the semiotics of communication and the semiotics of culture. The first trend considers communication as a transmission device based on a single code in which the monolingual system produces messages that are the materialized expression of this single language. The code machine fits this model. The second trend considers communication as the transformation of texts into texts, such as the written systems of signs. The messages of the first trend are

based on the process of information encoding and decoding from a single code along two poles: the emission and the reception. The messages of the second trend report on the processes of semiosis by modelling⁶ information into texts. It is no longer the single code and operators, but various codes in interaction that give rise to cultural systems.

Although it is not our purpose here to discuss the ideas of Roman Jakobson, it is important to acknowledge the contributions of his formulation to clarifying the above confrontation.

Unlike Lotman, Roman Jakobson did not hide his excitement about Shannon's conception. In fact, he took the diagram on communication to think about language and its functioning. How should an understanding of variations be possible in a closed set of invariable operations? This was an old question for Jakobson (Jakobson 1990: 143–213). The six-factor communication circuit was devised as one possibility. It does not propose a hierarchy: the message is the primary focus in ordinary linguistic exchange; but the poetic function could gain the focus in a metalinguistic process. Therefore, there is no longer a straightforward transmission. Jakobson's six factors shaped the performance of language, so the functions of language do not specify the correct position of the sender, message, receiver, code, channel or context as does the spatial diagram of communication designed by Shannon-Weaver.

Jakobson's model was the first step towards a wider contextualization of the accomplishments of the performance language in culture. The second step was taken by Mikhail Bakhtin's dialogic interaction. Lotman advanced when proposing the concept of text as a meaning-generating mechanism characterized by three functions: transmitting, generating, and memory (Lotman 1990: 9–19). These are not isolated actions but belong to the movement that allows us to distinguish the

⁶ Modelling is the word to designate data processing of informatics devices. For the semiotics of culture every sign system is endowed with a "modelling" capacity. That is to say: the codes transform information into signification. Modelling, in this context is far from building a model. Modelling corresponds to the ability to produce cognitive relationships. That is why the modelling system of culture figures as one of the most essential concepts from Tartu-Moscow School.

semiotics of culture from the semiotics of communication. These are the necessary criteria to face the paradoxes of communication in culture.

Before starting to deal with the paradoxes of communication, we must emphasize the impact of Lotman's ideas on some studies concerning problems of communication.

Thinking about the problem of cinema reception by considering early Russian films, Juri Tsivian follows the tracks left by Lotman and Jakobson saying:

According to Roman Jakobson's theory, as developed in the writings of Yuri Lotman, there exists a distinction between semiotics as a communications discipline and what Lotman defines as 'cultural semiotics'. The distinction is in the angle of research. The semiotics of communication examines the way people transmit information, and the model situation is *person — text — person*. Within this model the 'best' text is the one that best serves the purpose of communication. The clearer the channel the better the message transmitted along it. Other signals passing along the channel are regarded as 'background interference'.

Cultural semiotics has a different object. It studies texts as they are processed 'through' people. Here the model is *text — person — text*, and the main interest lies in the distortions rather than in the clarity of the 'message'. Cultural semiotics, therefore, investigates the discrepancies between the 'input' and 'output' texts. What for communication is 'background interference' or 'noise' may be turned into 'message' by culture. New texts are often born as misreadings of older ones. (Tsivian 1991: 104)

Here we should also mention the concerns about semiosis and the attempts to put it in the right place in communication studies. Having in mind the semiotic ideas on text and non-text, Göran Sonesson has achieved his "critique of communication critique" on the "spatial metaphor" and the theoretical models built outside the different levels of semiosis (Sonesson 1999).

Semiotics of culture did not only observe paradoxes in communication⁷ and its theoretical domain, but also tried to comprehend such paradoxes as a semiotic problem within the semiotic space of culture.

⁷ For methodological assumptions on the paradoxes from a wide perspective on communication see Kull 2005: 175–189.

Paradoxes of communication

Even if the efficiency of the abstract model of transmission was taken for granted as the paradigm for any communicational system, the message plays the role of a mere “passive carrier of sense” and, as such, it makes the “materialization of language” explicit (Lotman 1985: 50) in the process of transmission. Moreover, this sort of message is joined to the metalanguage of artificial languages which guarantees the stability of the system and prevents any alteration. Limited to the operation of an isolated system, the process of transmission takes place as the continuous emission of signals by means of a single code. Transmission shall apply only to primary level system, far from any possibility of interaction. Lotman’s assumptions on the abstract model of communication look for something missing: the semiotic space of meaning generation, or simply semiosis.

However, what at first appears to be only a theoretical review, emerges later as the boldness of a thought not frightened by the paradoxes. It seems that Lotman has believed for his entire life that “nella sfera delle ricerche semiotiche si rivelano sempre più chiaramente alcuni paradossi”⁸ (Lotman 1985: 49). As Mihhail Lotman confirmed later, “[g]enerally, Yuri Lotman was not afraid of paradoxes, but he did not avoid them” (Lotman, M. 2001: 98).

Before going on, we should ask: What is paradox for Lotman? What kind of paradox is Lotman talking about?

According to Mihhail Lotman, the mathematician Vladimir Uspenskij has offered the basic framework of Lotman’s thought: “paradoxical is the argument which is an opposite to some orthodoxical opinion” (Uspenskij, quoted in Lotman, M. 2001: 98).

If a paradox “includes an inner controversion” (Lotman, M. 2001: 98), then paradoxes of communication should be taken to be the core of the controversial process of transmission.

⁸ “In the field of the semiotics research always reveals some kind of paradoxes (free translation)”.

We would like to outline the three paradoxes in Lotman's criticism on communication theory: (1) The model $A \rightarrow B$ transmitting messages, from the addresser to the addressee; (2) The notion of encoding and decoding as isolated operations; (3) The idea that culture is a monolingual device.

The first paradox was born at the core of the theory of information and communication. It presupposes the point-to-point transmission based on the so-called efficiency of a "single code" between addresser and addressee. According to Lotman, the model works because it is applied only to the lower processing level of the system, almost without complexity (Lotman 1985: 50). If it cannot be applied to the communication processes of a higher level of complexity, it should not be admitted into the cultural context of sign systems. It should be mentioned that from the viewpoint of simplified languages transmission supports others paradoxes.

Sender and receiver playing different roles in the communicative process suggest the second paradox to Lotman. In the field of information theory emission and reception, encoding and decoding, are different activities. Each one performs its specific task. Even if the same and only code is used, there are no possibilities of changing places. Encoding and decoding provide the efficiency of the system as well as its predictability.

According to the temporal dimension of culture, its history, and the languages that have been generated by cultural codes throughout history, all sign systems are examples of an accurate dialogic process of self-organization, and the relationship among the systems is a self-communication process. Instead of the $I \rightarrow HE$ relation, the cultural transformations operate with $I \leftrightarrow I$ relations (Lotman 1990: 20–22; 1998: 42–45), as the following quote delineates:

In the "I–I" system the bearer of the information remains the same but the message is reformulated and acquires new meaning during the communication process. This is the result of introducing a supplementary, second, code; the original message is recoded into elements of its structure and thereby acquires features of a new message.

[...] The “I-s/he” system allows one merely to transmit a constant quantity of information, whereas the “I-I” system qualitatively transforms the information, and this leads to a restructuring of the actual “I” itself. (Lotman 1990: 22)

Lotman’s conceptions introduce the third and the greatest paradox of communication and cultural theory: the entire culture does not speak solely one unique language. Even the most simplified language plays an important role within the whole system. To belong to a hierarchy does not mean to be speechless. Every system of culture has to be able to organize information into a kind of language, or, a system of languages. So, every system “speaks” its specific language.

Supported by his concerns on culture’s polyglotism, if language defines the organized system by means of signs, then when observing the interrelationships among cultural sign systems, the recoding process appears as the main activity of the entire organization. Encoding and decoding do not say anything about the communicational interaction of culture. Therefore, language of culture was not shaped by the single encoding-decoding sign system’s performance. Languages of culture are modelling systems of recoding.

The more the semiotics of culture improved the description of the semiotic modelling systems, the more an understanding of culture’s linguistic complexity has increased. There is at least one reason for this: all the modelling systems of culture emerged from current cultural codes. Hence, cultural codes are, in themselves, recodifications: they cannot be produced as a result of a metalinguistic exercise. The modelling process is the extreme opposite of simplification, since it exists only through the semiosis of cultural codes. Therefore, Lotman’s achievements overcome the fragility of the abstract model supported by the theory of communication and information.

Upon understanding the three paradoxes, Lotman states: “semiotic studies cannot be reduced to a single mechanism of the transmission of information” (Lotman 1985: 51). This is only one of their functions — important but not the most essential. The primordial task of the semiotic system, defining it as such, is the production of new information,

“a *sui generis* intellect”. Needless to say, we came across the very notion of text, namely the text of culture and the universe of the mind.

The new idea that was brought into the scientific field of communication by Lotman’s investigatory boldness, touches the core of semiosis as a semiotic space where different languages arise. It should be said that the concept of text not only takes the place of the abstract model of communication. It strikes a mortal blow to the centralized idea of code transmission. As Mihhail Lotman asserts,

From the viewpoint of Tartu semiotics we cannot speak of text beyond communication — a text does not precede an act of communication. Text and act of communication are relational notions, one does not exist without another; there is no text beyond communication, there is no communication independent of text. The same applies to other participants in the act of communication: they become such only in course of this act. [...] Even more important is the notion of autocommunication, where addresser and addressee appear as the same physical person. What distinguishes them is text. (Lotman, M. 2001: 102)

Autocommunication has reached the highest degree of paradoxicality among Lotman’s formulations. “Communication does not arise from the prefixed unity; it creates unity, communia. Communication produces ‘me’ in ‘the other’ and ‘the other’ in ‘me’” (Lotman, M. 2001: 102).

At this point it should be asked in what sense do Lotman’s ideas presuppose Bakhtin’s conception on dialogism?

Before Mikhail Bakhtin and Lotman, Roman Jakobson had also assumed that the listener is a potential speaker in interactions. From the point of view of Bakhtinian dialogical assumptions,

[...] “me” and “you” appear as products of dialogue and dialogue turns out to be an existential notion: without “you”, who is in dialogue with “me”, there is no “me” either. Therefore, “me” and “you” are not constants, but variables: though for him also the participants of dialogue are indivisible entreties. For Bakhtin “me” is not the one that splits, but the word. The word is bigger than dialogue and for Bakhtin the word is dialogical. (Lotman, M. 2001: 102)

Lotman’s thinking on autocommunication inside semiotic space goes far and has overshadowed Bakhtinian logosphere. However,

interrelations should be taken into account. Michael Holquist (1981: 433) noticed that the Bakhtinian formulation on the “Galilean perception of language [...] that denies the absolutism of a single and unitary language” (Bakhtin 1981: 366) approaches the Lotmanian semiosphere. They are thinking about relationships in different levels. Holquist reproduces a Lotman quotation which seems to be Bakhtin’s.

[...] this is a process, not a state. Languages are continually stratifying under pressure of the centrifugal force, whose project everywhere is to challenge fixed definitions. [...] Stratification destroys unity, [...] to create new strata is the express purpose of art, or as Lotman happily put it, “art is a magnificently organized generator of languages” (*Structure of the Artistic Text*, p. 4). (Holquist 1981: 433)

Bakhtinian dialogism differs from semiosphere’s cultural dialogical mechanism in at least one aspect: the autocommunication process of meaning generating texts.

Not only the notion of the text, but also the dynamics of polyglotism were considered with all their greater implications: the natural movement of culture is toward abundance, not toward economy (Lotman 1985: 51). After all, the various systems are deeply interconnected; consequently, they have a strong need to guarantee the semiodiversity of the planetary ecosystems.

Autocommunication does not arise inside logosphere but can only move toward the semiotic space of culture that Lotman called semiosphere. Because of its irregularity, asymmetry, and diversity the semiotic space inside semiosphere was described paradoxically.

If we started saying that Lotman was not afraid of paradoxes we can now assert: Lotman not only observed the theoretical paradoxes of communication, but he found himself dealing with the paradoxes of semiosphere. However, he has assumed a different strategy. Lotman has embraced the paradox as the process of theoretical modelling. How fair would it be to say that the logosphere, and even Shannon and Weaver’s conceptions, were avoiding any suggestions of paradox?

The semiosphere can be seen as a “unified field of simultaneous interrelationships”, where everything asymmetrical and irregular lives on the boundaries. From Lotman’s semiosphere there surges the epistemological metaphor of communication: the museum metaphor described as follows:

Irregularity on one structural level increases the fusion of levels. In the reality of the semiosphere, the hierarchy of languages and texts, as a rule, is disturbed: and these elements collide as though they coexisted on the same level. Texts appear to be immersed in languages which do not correspond to them, and codes for deciphering them may be completely absent. Imagine a room in a museum, where exhibits from different eras are laid out in different windows, with texts in known and unknown languages, and instructions for deciphering them, together with explanatory texts for the exhibitions created by guides who map the necessary routes and rules of behaviour for visitors. If we place into that room still more visitors, with their own semiotic worlds, then we will begin to obtain something resembling a picture of the semiosphere. (Lotman 2005: 213–4; Lotman 1990: 126–127)

The semiotic space where the diversity of sign systems, of visual communication codes, of architecture design, of people speaking different languages, builds up, shapes the meaning generating universe of the semiosphere or the universe of the mind, as Lotman put it. In fact, “the structural heterogeneity of semiotic space” represents the epistemological metaphor of communication or, to be more specific, of the interactive process of communication.

The study of the semiosphere focuses on diversity and the unpredictable sign systems of the world. At the end of his reasoning Lotman concludes: “after having assimilated the experience of linguistics, semiotics of culture goes towards *culturology*” (Lotman 1985: 51). The approach of *culturology* does not intend to sweep away the paradoxes mentioned previously, but proposes alternatives about the dynamic functioning of culture. After all, without paradox, no science can be possible — Lotman dares to say at the end of his reasoning.

Mihhail Lotman, as well as Kalevi Kull devoted significant studies on the use of paradoxes in theoretical formulations. Based on Lotman’s paradoxical conceptions, both of them took into account the

paradoxality of communication in relation to semiosphere. Kull's concerns on "code duality" relate to the "coexistence of continuity and discreteness in any form of meaning-creating or significant communication" (Kull 2005: 177). Mihhail Lotman uncovered communication mechanisms according to dialogue, translation, and creativity, to deal with autocommunication processes oriented by *continuum* interrelationships inside semiosphere.

If paradoxes of communication are settled in semiotic space, then the interactive play of forces claims for "complementarity descriptions" (Kull 2005: 177). Namely, paradoxes hold the methodological role in semiotics. Lotman faced the paradox to "rise to the heights" and "descend to the depths" — to the ground of semiosphere.

Conclusion

General mechanism of culture does not only maintain information, but also preserves it and processes it continuously by encoding, decoding, recoding, and translating languages. Even Lotman has considered the text of culture as a memory device, and a program of action; such a program works through unpredictable operations. In this sense,

Define l'essenza della cultura come informazione significa porre il problema del rapporto che sussiste fra la cultura e le categorie fondamentali della sua trasmissione e conservazione, e in primo luogo del rapporto fra la cultura e le nozioni di lingua e testo, con l'insieme di questioni che esse implicano. (Lotman, J.; Uspenskij 1975: 29)⁹

According to Lotman, information precedes communication since it is the principle of life. Whereas life is the "inevitability of culture",

⁹ "Defining the essence of culture as information means to raise the question about the relation between the culture and its fundamental categories, that is, its transmissions and preservation, and first of all, the relation between the culture and the linguistic notion of text, with all their implications."

information is the conditioner of life itself. This is what Lotman states after realizing that “information is not a facultative attribute, but a vital condition for the existence of humanity. Fighting moves biological and social survival toward information. Fighting for life is fighting for information”, say Lotman and Uspenskij (1975: 28). Therefore, Lotman’s thorough arguments on the limits of the theory of communication lead to reconsider information processing in culture. Even before being an object of transmission, all information undergoes a sort of semiotic mediation when general transmission is encoded. In short, it is about an activity that does not lose sight of semiosis, as Lotman’s accomplishments have edged towards the typology of culture.

The goals of the typology of culture can thus be defined as: (1) description of the main types of cultural codes on the basis of which the ‘languages’ of individual cultures, with their comparative characteristics, take shape; (2) determination of the universals of human culture; (3) construction of a single system of typological characteristics relating to the fundamental cultural codes and universal traits that constitute the general structure of human culture. (Lotman 1977: 214)

An important distinguishing feature follows: the code of communication in culture is not an abstract model, but a complex manifestation. A dynamic mechanism regulates the action between the variant and invariants of the sign system. From the point of view of culture, code is a process of semiosis that develops the capacity of transforming information into meaning, and not only of transporting it. The semiotic concept of code presupposes transformation, change, and feedback.

It is time to acknowledge that cultural codes are constructions of other codes available in culture. In this sense, cultural codes are modelling systems of information: they only develop through recodifying or translating processes. The one that generates the information also transforms it by means of the intelligent device of memory. That is the aim of the typological study of culture.

In constructing a typological and structural history of culture, we must necessarily base our analysis on a separation of the content of cultural texts from

the structure of their ‘language’. In considering the sum total of facts available to the historian of culture, we must also distinguish between the system that can theoretically be reconstructed (a culture’s ‘language’) and the way in which the culture is realized from the mass of material external to the system (a culture’s ‘speech’).

In this way, we can examine all the facts in the history of culture from two points of view: as significant information, and as the system of social codes that permits the expression of this information with signs in order to make it the patrimony of a human collectivity. (Lotman 1977: 214)

From the standpoint of semiosphere, paradoxes of communication lead semiotic investigation not only to epistemological or methodological thinking: it is time to advance towards the ontology of communication (see Machado, Romanini 2011). Lotman’s scientific investigatory boldness has opened the path. What should we do but continue?¹⁰

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¹⁰ Thanks to Wilma Clark for the careful reading, corrections and suggestions.

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Научная смелость Лотмана: семиосфера как критическая теория внутрикультурной коммуникации

В центре статьи — анализ понятия семиосферы и то, как оно возникло из понимания культуры как информации, что означает не просто передачу сообщения от А к В, но общий процесс порождения значения/означивания. Следуя рассуждениям Лотмана по поводу парадоксов коммуникации и ее теоретического поля, настоящая статья противопоставляет следующие парадоксальные понятия и идеи: (1) классическое понимание того, каким образом адресант передает сообщение адресату; (2) понятие изолированных процессуальных систем; (3) идея того, что культура говорит на одном языке. С точки зрения семиосферы для изучения подобных противоречий новым подходящим объектом является понятие текста. Если в центр анализа культуры поместить понятие текста, все представится в неизолированном виде.

Лотмановское мышление не боится новых гипотез, когда он предлагает для научного изучения культуры понятийное поле семиосферы.

Lotmani teadusuurijalik julgus: semiosfäär kui kultuurisese kommunikatsiooni kriitiline teooria

Käesoleva artikli keskmeks on semiosfääri mõiste analüüs ja see, kuidas nimetatud mõiste on sündinud arusaamast kultuurist kui informatsiooni — mitte kui sõnumi edastamisest A-lt B-le, vaid kui üldisest tähendusloome protsessist. Järgides Lotmani kriitikat kommunikatsiooni paradokside ning selle teoreetilise välja suhtes, astub käesolev artikkel vastu järgmistele paradoksaalsetele mõistetele ja arusaamadele: (1) klassikalisele arusaamisele sellest, kuidas saatja teadet vastuvõtjale esitab; (2) isoleeritud töötlevate süsteemide mõistetele; (3) arusaamisele, et kogu kultuur räägib ühte keelt. Semiosfääri vaatepunktist lähtudes oleks taoliste vastuoliliste nähtuste uurimiseks sobiv uus objekt teksti mõiste. Kui kultuurianalüüsi keskmesse paigutada teksti mõiste, ei ilmne midagi isoleeritult. Lotmani mõtlemine ei tunne hirmu uute hüpoteeside ees, kui ta pakub kultuuri teadusliku uurimise jaoks semiosfääri mõistevälja.