

Interview with Vyacheslav V. Ivanov about semiotics, the languages of the brain and history of ideas

Ekaterina Velmezova¹, Kalevi Kull²

¹Faculty of Arts, 5096 Anthropole, University of Lausanne
CH-1015 Lausanne, Switzerland
e-mail: ekaterina.velmezova@unil.ch

²Department of Semiotics, University of Tartu
Jakobi St. 2, 51014 Tartu, Estonia
e-mail: kalevi@ut.ee

Abstract. The interview with one of the founders of the Tartu–Moscow school, semiotician Vyacheslav Vsevolodovich Ivanov (b. 1929) from August 2010, describes V. V. Ivanov’s opinions of several scholars and their work (including Evgenij Polivanov, Mikhail Bakhtin, Andrej Kolmogorov, Nikolaj Marr etc.), his relationships with his father Vsevolod Ivanov, as well as V. V. Ivanov’s views on the past and future of semiotics, with some emphasis on neurosemiotics, zoosemiotics, semiotics of culture, cybernetics, history of linguistics, study and protection of small languages. The interview also deals with V. V. Ivanov’s book *Even and Odd*.

Vyacheslav Vsevolodovich Ivanov is an eminent modern philologist, philosopher and theoretician of the history of culture; he is a poet and translator, one of the founders of the Tartu–Moscow school of semiotics. In the last decades, he has worked both in Moscow (as Director of the Research Institute of World Culture at the Moscow Lomonosov State University and Head of the Russian Anthropological School of the Russian State University for Humanities) and in Los Angeles (as Professor

at the University of California), moving between these places each year. We interviewed him in August 2010.¹

Q. Vyacheslav Vsevolodovich, not only do you speak an incredible number of foreign languages, but you also master the languages of various disciplines. Since childhood, you have been interested in different sciences and the extent and volume of your knowledge allow us to consider you one of the last scientists of encyclopaedic learning. Besides, in your researches you have often tried to unite, to draw together fields of knowledge, which today seem very distant from each other, because they are separated either by the traditional structure of academic disciplines or by too specialised university teaching. For instance, in your works, you bring together academic disciplines such as comparative historical linguistics and archaeology, the study of sign systems and the exploration of the brain structure and functions (neurosemiotics). All this reminds us of the aspirations of many Soviet intellectuals in the 1920s–1930s — such as Olga Frejdenberg, Lev Berg, Nikolaj Marr, Pavel Florenskij, Jakov Golosovker and many others (including those who worked outside the Soviet Union, for instance, Eurasians who emigrated from the USSR) — which were to create an “integral”, a “holistic” science that would have united separate fields of learning.² In view of modern semiotic researches, one could think for example of the working program of Charles W. Morris, who was one of the founders of semiotics. What is your attitude towards these scientific programs—“paradigms”? Do you think that this desire for a synthesis of sciences is indicative of the wish of humanity to evolve towards the noosphere, the sphere of human thought, the description and definition of which have been elaborated by Vladimir Vernadskij?

¹ Translated from Russian by E. Velmezova. In Russian, this interview can be found on the *Sign Systems Studies* website (http://www.ut.ee/SOSE/sss/volumes/volume_38_preprint.html). In French, it is published in *Cahiers de l'ILSL* 31: 247–268.

² See Ivanov 1976.

V. V. I. Yes, I agree that evolution towards the noosphere could be associated with the unification of sciences and other forms of human spiritual activity. I have always sympathised with the aspiration towards coordination and unification of sciences, which have something in common in their methods and initial standpoints. In particular, for the modern state of knowledge, it seems very important to expose the role of observing subject (in the broad sense of the word, including devices used for and during observation). The observer's influence over his observations has already been investigated in quantum mechanics; the choice of reference point by the observer is important in the theory of relativity. The anthropic principle, which is accepted by many physicians, assumes, in one of its readings, an initial orientation of cosmic evolution towards a high probability of the emergence of intelligent life. May we think that a reasonable observer is built in the structure of the universe, and that without him, the universe would turn out to be a "vacuous aggregation" of particles and their accumulations? Only an observer, with a subjective shift of perception that is typical to him, is able to create a semiotic model of the universe. Therefore, without this observer, the universe would have never existed as a particular object of observation. From this point of view, intellect predetermines the existence not only of the self-conscious Cartesian subject (*cogito ergo sum*), but of the whole world that constitutes the content of his consciousness.

Various observers perceive the world differently. In natural sciences, this phenomenon is studied by investigators of biologically conditioned differences (such as K. von Frisch in his experiments on bees) and by psychologists of cultural and historical orientation. When I was young, I read the semi-banned works of older researchers, and was impressed by the conclusions of A. R. Luria (influenced by L. S. Vygotsky) about the optic perceptions of Uzbeks who lived in kishlaks and did not see the visual illusions that Europeans were used to. Various capacities of perception inside different parts of the brain of one single person have been discovered in neurosciences. By studying poetical language, it is possible to find out all the variety of semiotic models of the world that one single author can create. Related to this, the aesthetic problem

of singularity and newness in art (in particular, in the art of avant-garde and, in general, in “hot” cultures, if we refer to Lévi-Strauss) is explained with an orientation towards the increase of quantity of information in the text, which can be achieved thanks to defamiliarization (*ostranenie*). This, in its turn, is connected with the sociological study of the increasing individual possibilities in groups of various kinds, evolving towards the realisation of anarchical and democratic ideas. 20th century philosophy with its linguistic turn (R. Rorty’s expression) has discovered the role of the speaking subject; most eminent linguists (E. Benveniste, J. Kuryłowicz, R. Jakobson) and logicians (B. Russell, H. Reichenbach) considered basic linguistic categories as being determined by the semiotic value of the so-called egocentric words and shifters. Similar problems are studied in various schools of linguistic semantics in the light of comparison of expressions, in different languages, of time, space and other world outlook frames that determine views and conceptions of reality and its basic elements.

Q. Your father, the famous writer Vsevolod Ivanov, is known to have been keen on mathematics, (on the theory of relativity, among other things). He had a wide and encyclopaedic education and was interested in various sciences of his period and constantly broadened his horizons by self-education. He was on friendly terms with Jurij Tynyanov, Viktor Shklovskij, Evgenij Polivanov... Father Pavel Florenskij showed him his own electrotechnical laboratory... In previous interviews, you have already said that he had devoted much attention to your education. To what extent were your own broad interests (including your passion not only for linguistics, but also for philology in the broad sense of the word, for mathematical methods in humanities, cybernetics and semiotics) influenced by his versatility? Was your father adherent of the “holistic paradigm” in science?

V. V. I. To me, my father was the incarnation itself of a holistic approach to knowledge, which was always concrete to him. When I was seven or eight years old, he decided to familiarise me with high-quality examples

of scientific discoveries, such as J.-H. Fabre's works on insects. He told me, enthusiastically and in great detail, about the most remarkable passages he found in these researches and then gave me these books to read. To this day, I am amazed at the way he introduced me to the world of astronomy and astrophysics, which was developed in the books of the British scientist James Jeans *The Stars in their Courses* and *The Universe Around Us*, which were published at that time. Giving me these popular science books, my father told me he considered most interesting the idea about accumulation of matter in the centre of our galaxy. At that time, this idea did not attract the attention of specialists very much; however, later on, it led to the conclusion about the presence of black holes in galactic centres and this fact is taken into consideration in modern cosmological models. For my father, this fact was striking and I am amazed at the strength of his intuition. I speak about my father's influence over my posterior researches (including my studies of the history of sciences) in the Introduction to my book — a course of lectures on the history of science, which has recently been published in the 7th volume of my *Selected Works on Semiotics and History of Culture*.³

When he learnt (without any enthusiasm, let me be honest) that I had started to write poetry, my father told me that he had always tried to corroborate his writing experiments with his scientific readings. He brought me V. M. Zhirmunskij's works on composition and metrics of lyrical poems, which had been published in the early 1920s, advising to read them. In the rich library of my father, there was one of the first editions of the outstanding summarising work about the organisation science written by the doctor, statesman and science-fiction writer A. A. Bogdanov. He was among the early Russian forerunners of cybernetics, the importance of which was later noted by the eminent Russian mathematician A. N. Kolmogorov.

As to the books that my father particularly appreciated, among his big collection of philosophers' works, there was *Creative Evolution*, by his favourite thinker H. Bergson, which he recommended to me when I was young. This book convinced me of the necessity to undertake

³ Ivanov 2010.

scientific comparison of human civilisation with insect communities such as ants: since childhood, I have been deeply interested in ants and have always liked to observe them. Later on, I found similar comparisons in the biosociology⁴ of E. O. Wilson, the expert on ants.

Q. Modern philology owes you the “rediscovery” of many names that had been unfairly forgotten — such as the name of very talented linguist Evgenij Polivanov, who lost his life under Stalin. Published in the journal *Voprosy yazykoznaniya* in 1957, your article about Polivanov⁵ came at the beginning of a period of heightened interest for Polivanov’s intellectual heritage, and this interest is still going on. Reading about Polivanov, one discovers that he had much in common with your father — for instance, both were very all-round, both had unusual, wonderful (almost supernatural) abilities, both were interested in circus... Was your interest for Polivanov influenced by your father’s and by what he told you about this linguist?

V. V. I. I began to work seriously on Polivanov in my first year of postgraduate studies, when my university professor M. N. Peterson suggested I write a paper on the origins of phonological studies in Russia (at that time, it was the most advanced field of theoretical linguistics). I found out that Polivanov, who developed J. Baudouin de Courtenay’s ideas, was the first to formulate the basic principles of diachronic phonology, which were later systematically set forth by Jakobson. When I began to compose a poem about Polivanov, I made some inquiries about him, questioning many of those, who had known Polivanov, including Peterson and other linguists who had worked with him. I also asked questions about Polivanov to V. A. Kaverin, who gave a not very faithful representation of him as the professor and drug addict Dragomanov, in his novel *The Troublemaker* [*Skandalist*]. The poet S. I. Lipkin was one of the last who saw Polivanov, when he went to Frunze (nowadays, Bishkek, in Kyrgyzstan) for the translation of the monumental epic

⁴ V. V. Ivanov in fact uses the term ‘*biosotsiologiya*’ (and not ‘*sotsiobiologiya*’) here.

⁵ Ivanov 1957.

poem *Manas*. Polivanov was already in prison during Stalin's terror. He agreed to discuss the word-to-word translation of *Manas* with Lipkin, on one condition, namely that he were given a dose of drugs and that his wife were allowed to visit him. Apropos of translation, Lipkin and Polivanov never came to any agreement: Polivanov insisted on translating from the Kirghiz original, the almost pornographic description of a wedding between camels. Upon Polivanov's invitation my father visited an opium den in Moscow with him, on Tverskoj Boulevard. On the way there, Polivanov talked with some Chinese (at the time, they were numerous in Moscow): in their respective Chinese dialects. One day, my father went to Polivanov's and he saw tiger cubs, which Polivanov had brought back from the Far East. Polivanov was finishing shaving in the next room and asked my father to sit in an armchair near the entrance and not to move when the young tigers would lick his hands: it was important not to excite them with the smell of blood, which could appear under their coarse tongues. Polivanov explained to my father how he learned phonetics of new languages that he studied, relating to his general ideas about the human phonetic apparatus. During the war, my father was evacuated to Tashkent, where he bought a local scientific edition from the early 1920s, with a number of Polivanov's short articles on various subjects: from denominations of writing instruments and the name of the city of Tashkent to *The Judgement of Shemjaka*. These were the first Polivanov's works that I read.

Many years later, I obtained particularly valuable information about Polivanov's surprising parapsychological powers from Olsuf'eva (Larisa Bogoraz's stepmother). As I have found out, in her youth, she was a friend of Polivanov's wife, Brigita Al'fredovna Nirk, who was Estonian (her Estonian pronunciation is described in Polivanov's linguistic textbook *Introduction to Linguistics for Oriental Institutes of Higher Education* [*Vvedenie v yazykoznanie dlya vostokovednyh vuzov*], which has been recently reprinted). Brigita Al'fredovna and Evgenij Dmitrievich Polivanov had invented a way of exchanging their ideas without talking. One day, Polivanov invited Olsuf'eva to take part in one of their sessions: both women were sending their thoughts to Polivanov who

answered them in the same way and afterwards voiced the received information.

Polivanov played an important role in politics, editing the first Chinese communist newspaper in Russia. I continue to study his biography and, in an electronic book of collected articles for G. G. Superfin's birthday celebrations (a graduate from the University of Tartu), I published a study containing materials on Polivanov that I had found in the Comintern archives. In the Comintern, Polivanov was at the head of one of departments for the Far East (in 1938, during the era of Stalin's terror, Polivanov was shot). My second article about Polivanov as a linguist and poet (written a long time ago but still unpublished) will appear in the second (and last) half-volume of the 7th volume of my *Selected Works*.⁶

Q. In 1959, you were dismissed from the Moscow State University, first of all, for your disagreement with the official disapproval of the novel *Doctor Zhivago*, for your friendship with Boris Pasternak and finally for the support of Roman Jakobson at scientific congresses. Thirty years later, this resolution was officially revoked and declared erroneous. But back then, in the late 1950s, humanities institutes received letters about your anti-Soviet beliefs. It forced you to go and work at the academic Institute for Fine Mechanics and Computer Engineering, where you worked at computer translation (at that time, computers were still called *EVM*, “*elektronno-vychislitel'naya mashina*”, “electronic calculating machine” in the Soviet Union). Besides, you were the first head of the linguistic department at the Scientific Academic Committee for cybernetics, led by the academician Aksel' Berg. Therefore, you were at the origins of cybernetics in the USSR. Your interest in computers is also reflected in your book *Even and Odd [Chet i nechet]*,⁷ which we would

⁶ Ivanov 2011.

⁷ Ivanov 1978 (in 1983, this book was translated into German [*Gerade und Ungerade. Die Asymmetrie des Gehirns und der Zeichensysteme*, Stuttgart, Hirzel], in 1986, into Hungarian [*Páros és páratlan. Aszimmetria az agyban és a jelrendszerekben*, Budapest, Kozmosz], in 1988, into Japanese [*Guusuu to kisuu no kigouron. Nou to shokigou shisutemu no hitaishou*, Tokyo, Aoki Shoten]. In 1990, a revised edition of *Chet i nechet* was published in Latvian [*Pāris un nepāris. Smadzeņu asimetrija un*

like to speak about in more detail, later. Of course, as they say, history does not exist in conditional mood... Of course, you knew personally and were friends with many eminent physicians and mathematicians: Petr Kapica, Andrei Sakharov, Lev Landau... Of course, already back then, your favourite field in linguistics, linguistic reconstruction, implying comparison of various languages and reconstruction of initial linguistic forms, was a very exact sphere of activity. In 1956–1957, together with Petr Kuznetsov and Vladimir Uspenskij you conducted a seminar on the application of mathematical methods in linguistics at the Moscow State University. Nevertheless, do you think that you would have worked actively on the application of mathematical, exact methods in humanities, had you not been forced by external circumstances, first of all, by your dismissal from the Moscow State University?

V. V. I. When I was dismissed from the Moscow State University, I had to interrupt my very intensive pedagogical activity for a long time. (At that time, in one single term, I delivered lectures on the Hittite, Mycenaean, Greek, Old Prussian, Common Slavonic, Proto-Indo-European and Tokharian languages and an introduction to linguistics for orientalists.) It liberated a lot of time for public activities in the Scientific Council for cybernetics where, thanks to A. I. Berg's assistance, we managed to elaborate a number of important resolutions concerning the creation of new departments in many research institutions, which had to work on structural linguistics and semiotics (these disciplines were only emerging in our country at that time). Even before, I had been interested in computer translation, that is why they offered me to head a research group at the Institute for Fine Mechanics and Computer Engineering which specialised in this field (that year, in humanities institutes, they were afraid to take me on for political reasons: Moscow University, my former place of work, refused to confirm my Soviet loyalty).

zīmju sistēmu dinamika, Rīga, Zinātne]). The last revised Russian version of this book (*Nechet i chet [Odd and Even]*) was published in the first volume of V. V. Ivanov's *Selected Works on Semiotics and History of Culture* (Ivanov 1998).

Q. Semiotics is usually defined as a science of signs and their systems. However another interpretation of semiotics is also possible — as that of a “holistic science”, a dialog or even a synthesis of sciences. Returning to the surprisingly broad field of your activities, may one say that it is precisely semiotics — both in the sense of science of signs and in the sense of holistic science — which allows you to unite all these spheres of knowledge in which you are specialised? You once mentioned that at the age of eighteen, you had been strongly influenced by the lines about the science of semiology in Ferdinand de Saussure’s *Course in General Linguistics*...

V. V. I. I was certainly close to the Saussurean interpretation of the unity of all sciences studying objects, which have a value within the framework of particular systems (like words and other signs, monetary and other economic symbols). I shared this broad interpretation of semiotics with V. N. Toporov, which is reflected in the many works which we wrote together in the 1960s–1980s.

Q. As to the “Moscow semiotic school”, was it (and maybe still is) “semiotic” precisely in the sense of “aspirations for a holistic science”? Whereas the range of subjects in the researches of Moscow semioticians is so strikingly large, reflections on signs and their systems are often absent...

V. V. I. For me, one of the essential distinctive features of the Moscow and Tartu (Lotman’s) groups consists in their attention not only to signs, but also to their complexes and sequences, among other things, to various texts (including myths, films and canvases as systems of organised signs). This way, the limits of semiotics were considerably broadened. We tried to include in semiotics fields such as history and the study of religion which, at that time, suffered particularly from the dominance of official pseudoscientists. In his works, V. N. Toporov has contributed a lot to these disciplines.

Q. In your book *Even and Odd*, your ideas about the structure and functions of the human brain are combined with thoughts about the organisation of urban spaces and “primitive societies”, about robotics, etc. You study what different objects have in common. Can one therefore say that this book is, in fact, “semiotic”? (Besides, the word “semiotics” appears there several times.)

V. V. I. Yes, in this book I describe my semiotic views of the time.

Q. You were the co-author of *Theses for a Semiotic Study of Culture* (1973).⁸ In this collective manifesto, central theoretical premises of a new discipline, semiotics of culture, are formulated. How do you rate this text today?

V. V. I. This text was composed on Juri Lotman’s initiative. He insisted on creating one single conception, but his theory was not accepted by my close friend, the late A. M. Piatigorsky (already at that time, Piatigorsky was opposed to the idea of duality and refuted the importance of L. S. Vygotsky’s and S. M. Eisenstein’s views; in these questions among others, our opinions diverged categorically). B. A. Uspenskij found some contradictions in our text, pointing out the parts written by V. N. Toporov and myself: according to him, these passages did not fit in with the whole text. Besides, Lotman had intended to involve Roman Jakobson in the work on this text, but the latter did not answer my question about our possible collaboration. Therefore, it looks as though we did not manage, even at the start, to create a united text. Nevertheless, I still consider as very promising the basic direction of the study of multilevel texts that is outlined in our *Theses*. You can find similar ideas already in G. G. Shpet’s *Aesthetic Fragments* [*Esteticheskie fragmenty*].

Q. A sketch of your research activity was published in 2007.⁹ Its author, S. A. Krylov, wrote in particular, that it was Roman Jakobson, with

⁸ Ivanov, Lotman, Pjatigorskij, Toporov, Uspenskij 1973.

⁹ Krylov 2007.

his “awareness of unity of methods peculiar to all disciplines studying signs and texts”, who had influenced the shaping of your research views the most. Do you agree with this point of view today? Which other researchers, including those for whom texts and signs were not direct objects of study, influenced the evolution of your theoretical conceptions?

V. V. I. Jakobson played an important role in the “semiotic turn” in Soviet humanities in the late 1950s – early 1960s. At that time and afterwards, I was also influenced by L. S. Vygotsky, M. M. Bakhtin, A. M. Zolotarev, A. M. Hocart, C. Lévi-Strauss and by linguists whom I have already mentioned today.

Q. We know that not only in your researches, but also in your pedagogical activity, speaking of a new paradigm, your dream is to unite the achievements of humanities with discoveries in the field of natural and exact disciplines. Let us point out that you have founded the Russian Anthropological School of the Russian State University for Humanities and the Institute of World Culture of the Moscow Lomonosov State University. As you have already said many times, the idea of a new kind of education can (and even should) also be connected with the study of brain structure: children should begin to acquire knowledge rather early, but at the right time, that is, precisely at the moment when the predisposed parts of the brain “are switched on”, in order not to lose time and to give a stimulus for the development of human capacities. Are there many modern pedagogues-theoreticians who share your point of view?

V. V. I. I discussed similar ideas many times with the mathematician Kolmogorov: during his life, he worked a lot on the problem of teaching mathematics at school. I tried to put my ideas into practice, by running a group on decryption of ancient scripts for schoolchildren. In 2008, I exposed these ideas in a talk given at the International Conference on Cognitive Sciences in Moscow, but I cannot say that I had the support

of the majority of the audience. A practical realisation of pedagogical ideas which are close to mine can be found in British primary schools: they begin to educate children at the age of five and teach them modern knowledge extensively, including disciplines which are absent from Russian non-specialised (non-mathematical) school education, such as probability theory and combinatorial analysis (I taught my group specifically these subjects).

Q. There are legends about how many languages you know. You have translated and published texts from eighteen languages, you deliver lectures not only in Russian and English, but also in German, French, Spanish, Italian... They say that with everybody you can speak his mother tongue. As you have once said, “I am not a polyglot, but I read in a hundred different languages”: let us note that you consider yourself a linguist rather than a polyglot... Anyhow, you are an exceptional case combining both things. Many modern linguists believe that capacities for theoretical linguistics (and even for theoretical thinking, in general) and language competence are complementary, and most often they exclude one another. What is your opinion on this issue, if we refer to your knowledge about brain structure and its functioning?

V. V. I. Among my most brilliant first university students, there are outstanding linguists who are born polyglots like A. A. Zaliznyak, for instance. Nevertheless, with time, even they pay more and more attention precisely to linguistics. As to the experimental works on the human brain in which I have taken part, linguistic areas of both cerebral hemispheres are involved in language activity (the left hemisphere is concerned with the main language for the corresponding society, while the right hemisphere — with the second, supplementary language in situations of bilingualism). At the same time, another brain area, distinct from the region ensuring proficiency in one or another language, is in charge of metalinguistic operations connected with the creation of synchronous grammars of every spoken or studied language.

Q. If you prepared a new edition of *Even and Odd / Odd and Even*, what would you change radically in this text? For example, would you compose a chapter about the new methods that allow to study brain functions of healthy people — and not only of patients, with whom neuropsychologists mainly dealt earlier?¹⁰ Has your view on the human brain potentialities changed, since the time of the first edition of this book?

V. V. I. I am not sure that modern non-invasive methods of studying the brain have already yielded results that should be included in a new edition of a book dealing mainly with neurosemiotics. In general, these methods (magnetic resonance and various tomograms) contribute to the idea that solving particular problems, brain often functions as a whole, coordinating the activity of its different areas. However, certain details concerning the division of functions and interaction of various brain areas have not been studied enough yet. Modern scientists have only recently started to understand some very important things about interpreting encephalograms and their correlation with the simple and concrete acts that we perform. Unfortunately, these researches are progressing more slowly than expected. At the same time, owing to some absolutely new natural-science models, more and more data is being accumulated and it indicates the necessity to change our current views significantly. The hypothesis of prominent mathematicians (like R. Penrose and J. I. Manin) concerning the possibility of applying the model of high-temperature superconductivity to the brain seems very probable. I have discussed with some specialists the possibility of describing in a more exact way processes such as the appearance and diffusion of epileptogenic activity.

¹⁰ Already in the late 1950s – early 1960s, V. V. Ivanov studied linguistic aspects of aphasia in A. R. Luria's laboratory at the Burdenko Institute of Neurosurgery. Among his other works on aphasia, there are, in particular, Ivanov 1960 (abstract of his talk given at a congress on speech pathologies) and Ivanov 1962 (article written based on this talk).

Q. In *Even and Odd*, you study the functioning of both cerebral hemispheres and compare the human brain to a complex of two robot-like computers which were created at the time when you wrote the book. What is your current point of view on the metaphor “the brain is a computer”?

V. V. I. In a revised version of *Even and Odd* which was published (under the title *Odd and Even*) in the first volume of my *Selected Works on Semiotics and History of Culture* and in some of my posterior articles, I already pointed out that when trying to understand the brain, scientists usually resort to technical models which had been worked out by that time. For example, I. P. Pavlov drew a parallel between the brain and the functioning of an automatic telephone station. The late L. J. Balonov and V. L. Deglin (with whom I collaborated) proposed a very suitable comparison between two cerebral hemispheres and a technical model of two interconnected devices, one of which dampens another, slowing down and modifying its functioning. Now, I think it could be possible to think over a similar model, where one of the interconnected hemispheres resembles a classical computer, while another works like a quantum computer.

Q. Structuralists have often been reproached for their aspirations to reduce in their descriptions the diversity of language(s), folklore, mythology — and, on the whole, of almost all cultural, social and political phenomena, to the model of binary oppositions (one’s own — alien, left — right, even — odd)... Do you agree with these reproaches today, do you also consider binary models as oversimplifying? If, on the contrary, in your opinion, the “phenomenon of binarity (or duality)” is a part of reality rather than a descriptive model, do you think that it is specific to human beings only, or also to animals?

V. V. I. The role of “binary principle” in social systems of various kinds was discovered by R. Harris, A. M. Zolotarev, A. M. Hocart and other ethnologists (in the Russian State University for Humanities, I recently

gave a course of lectures on this subject which was afterwards published as a separate book).¹¹ Linguists revealed the significance of this principle describing language systems, both modern and reconstructed languages (I was much impressed by the reconstruction of Akkadian made by the assyriologist I. Gelb who had never been structuralist). Descriptions of many so-called primitive societies, to which the principle of duality is so important, show that this principle was not introduced into the metalanguage of semiotic description, but that it is a part of the described structures. Judging from my conversations with physicians and mathematicians (in particular, with the founder of supermathematics, the late F. A. Berezin), binarity is essential also for physical models of the world. Complex systems, which many humanities deal with, are easier and more convenient to describe with a number of more than two elements (for instance, there are over ten elements in the semantic model of A. Wierzbicka who develops Leibniz's ideas), but sometimes it is possible to represent relations between them with binary schemes.

Q. In the book *Even and Odd* you touch upon the problem of not only binary, but also ternary divisions in the history of cultures. We also find the concept of ternary cultures in Juri Lotman's last books. In general, how would you answer today the question about the basic structures in the history of human cultures? Which structures — binary or ternary — should we consider as fundamental? Or do you think that they are not incompatible?

V. V. I. In my course of lectures on Indo-European mythology and poetics, which I give to postgraduate students-Indo-Europeanists in UCLA, I discuss constantly the correlation between ternary and binary models. I managed to launch a discussion on this subject in my correspondence with Georges Dumézil who was the chief propagandist of the ternary model as being specific to the Indo-European system. I suppose (and it was also V. Turner's opinion) that it is possible to explain the emergence of ternary systems from binary ones. It is worth to note

¹¹ Ivanov 2008. See also Ivanov's earlier work, Ivanov 1972.

that the poet N. S. Gumilev in his lectures (on which he worked before his arrest and shooting and which have only recently been discovered) had also insisted on a scheme of Indo-European castes which is very close to the model Dumézil elaborated later. It would be interesting to find out a precursor of both of them (maybe in France). However, in Gumilev's model there was a particular caste of poets (like the Druids in Ancient Ireland), that is why, his model was quaternary, unlike Dumézil's scheme.

Q. You have already discussed (in particular, in the book *Even and Odd* where you refer, among others, to the French anthropologist André Leroi-Gourhan) the danger posed by the reduction of many manual operations in the modern society. Indeed, we less and less write with pencils and pens, preferring instead to type on computers. However the hand is directly connected to the brain. So what can we do? Force ourselves — and especially, compel children — to write, rather than to press keys? Or calmly go with the flow of evolution?

V. V. I. I consider very important P. Cushing's statement (according to L. Lévy-Bruhl, it was a brilliant idea) apropos of the Indians' particular manual concepts. Sergej Eisenstein also emphasized the importance of this discovery; he attempted to repeat Cushing's experiment and to practice the language of "manual concepts". This drives me to think that participation of hands in many fields of art (for instance, in sculpture, in graphic arts, in painting, in some types of instrumental music and, probably, in music in general) is still necessary for very deep reasons.

Q. Nikolaj Marr (whom we have already mentioned today) has also written a lot about the fundamental role of the hand in the language evolution. Do you consider some of Marr's ideas to be correct — for example, his thoughts about the kinetic language? If so, what other of his ideas concerning language and linguistics seem to you particularly interesting and worthy of attention?

V. V. I. Marr had an amazing intuition, although he neither was able nor even wanted to substantiate with rigorous proofs many of his intuitive discoveries (such as those in the domain of manual gestures and their importance for the language, or discoveries concerning the genetic relationship between Basque and some other languages; the belonging of Basque to the Sino-Caucasian linguistic macrofamily was later rigorously proved by S. A. Starostin). I am also interested in Marr's participation in the circle for the study of archaic consciousness strata in modern language(s) and in the language of cinema (this group was created by Eisenstein, Vygotsky and Luria).

Q. Apart from the reduction of the role of hands and of manual work in modern post-industrial societies, another point where we would not follow the "natural stream of evolution" is the swift disappearance of natural languages. In the Institute of World Culture that you head, a Department for linguistic and cultural ecology has been created. Researchers there particularly work on publications about endangered small languages. What else could be done (by linguists, among others) to prevent the extinction of languages? Or do you think that any efforts will finally turn out to be vain?

V. V. I. I hope that the improvement and reduction in price of machine translation methods could result in the creation of numerous translation programs which would make it possible for people speaking endangered languages to participate in everyday (in particular, economic) life. This way, the main obstacle to the assimilation of such languages by younger generations would be removed. At present, we can only rely on the possibility of creating a computer database for grammars, vocabularies and phonological systems of every endangered language. In order to ensure a successful continuation of the collaboration between linguists and geneticists trying to reconstruct the most ancient periods in the history of mankind, it is necessary to assure, in the very near future, the description of hundreds of endangered languages (especially in New Guinea). These languages are still practically unknown (in particular,

the history of their evolution and their genealogical classification), which explains the fact that our ideas about ancient linguistic macro-families, going back to the era when our ancestors had left Africa and settled in other territories, still remain tentative.

Q. In *Even and Odd*, you deal with the problem of authorship and touch upon the very beneficial (in your opinion) tendency of the disappearance of subjective and personal claims, considering this trend as more or less characteristic of the time when you were writing this book. It reminds us of Pasternak's lines: "To be famous is not nice... The aim of creativity is self-negation, not to create a stir or a public success...". Today the problems of authorship are much discussed in connection with Mikhail Bakhtin. You were a friend of his and, in 1973,¹² one of those who recognised him as the author of books which are sometimes published with the specification "Bakhtin under a mask" [*Bakhtin pod maskoj*]. Why, in your opinion, has Bakhtin never given any direct "official" answer to the question of whether he was or not the author of these books? On the whole, do you think that current discussions about the authorship of books such as *Marxism and the Philosophy of Language* [*Marksizm i filozofiya yazyka*] or *The Formal Method in Literary Scholarship* [*Formal'nyj metod v literaturovedenii*] are legitimate? Is it possible to solve this problem?

V. V. I. Bakhtin and, especially, his wife gave me an unambiguous answer to the question concerning, for example, the book on Freudianism. When Bakhtin did not reply immediately, his wife entered our conversation and said: "Well, Mishen'ka, you did dictate me the whole book, from beginning to end". However we should not forget that Bakhtin wrote knowing that these books would be published under the names of people who were alive, who were his disciples (V. N. Voloshinov) or close friends (P. N. Medvedev). He realised very well his degree of responsibility and could not put them in a difficult situation. That is why, in these books, appears the voice of a thinker who, unlike Bakhtin,

¹² Ivanov 1973.

accepted the official Marxist philosophy. Besides, one can distinguish another voice there, Bakhtin's. We should not confuse them. That is why it is not easy to interpret these texts.

Q. *Even and Odd* reflects your interest in cybernetics. What is cybernetics today, in your opinion? In particular, how would you define cybernetics with respect to semiotics — for instance, going back to your ideas about the role of semiotics in cybernetic researches that we find in your foreword to the abstracts of the Symposium for the structural study of sign systems in 1962?¹³

V. V. I. At that early period of its history, cybernetics involved numerous fields of knowledge which they had just started to work on (and which had only just been authorised or authorised partly in the USSR). Since that time, many parts of this rich complex of disciplines have moved to the field of artificial intelligence, cognitive sciences and many other quickly developing branches of knowledge that do not have a generally accepted name. I am a linguist and do not attach much importance to names. I am inclined to accept Kolmogorov's hypothesis that in the future, sciences will be united by their common approaches rather than by their objects of study. In the works of American researchers, we find more and more attempts to reunite and revise all natural sciences and many humanities from the point of view of science of information (in the broad sense of the word, including quantum theory of information); in this respect, the theorems proved by L. B. Levitin and his co-authors are very important. This approach was the most similar to what we understood by cybernetics. Semiotics studies various kinds of communication and of spiritual creativity in aspects, which are very close to the theory of information in the broad sense of the word.

Q. On the last pages of the book *Even and Odd* ('Instead of epilogue' [*Vmesto epiloga*']) you said that "biological discoveries lift the veil on the unity of knowledge", which brings us again to the idea of semiotics.

¹³ [Ivanov] 1962 (anonymous publication); Ivanov 1997.

Would you agree with this point of view today, giving to biology the very first priority in semiotic studies?

V. V. I. Yes, the potential of neurosemiotics seems crucial to me. I attach a lot of importance to discoveries concerning mirror neurons of various primates and human beings. We can consider the question about a physiological substratum ensuring the participation of every person in a community, inside which information of various kinds circulates, including information exchange between the mirror neurons of different people. This process may be compared with what is being studied and known as entanglement in the quantum theory of information. Further researches must show if this comparison is only a metaphor or if it has a deeper sense.

Q. Finally let us ask you a question about the future... and a personal question. You studied the theory of Nikolaj Kondrat'ev. This economist (who lost his life under Stalin) discovered the law of a wavelike evolution of society. According to this law, new discoveries are stimulated by a period of economic recession. Taking into account the recent economic crisis, does this mean that we can expect some new important discoveries in the near future? In general, how do you see the present and near future of science(s), both in Russia and in the West? In particular, what would you say about the present and future of semiotics? Which semiotic trends do you consider as particularly promising?

V. V. I. At present, science has many difficulties mainly because of the unsteady nature of its financing by society (and such financing is necessary). In developed countries, this financing is ensured by the State. However, corrupt and poorly educated as governments are today, it leads to various mistakes and unreasonable wastes of money. The system of grants and large bureaucratic organisations supervising sciences by means of half-educated or corrupt functionaries results everywhere in a decline of experimental science, of education and of the valuation of discoveries. In the very near future, I foresee a crucial necessity to find

a way out of the crisis science is going through; any further delay will threaten the existence of humanity as a biological species because biological and geological factors can intervene. I expect for very important discoveries at the intersection between semiotics and disciplines studying the human nervous system. Methods of both modern mathematics and natural sciences are likely to spread to semiotic studies.

Q. In the book *Even and Odd*, you discuss a photograph of Sergej Eisenstein's brain which was made after his death during his autopsy (let us remember that your book owes its title to Eisenstein, to his study *Even and Odd* [*Chet i nechet*]). The size of Eisenstein's right hemisphere exceeded considerably the left one — which, as you say, one could suppose already when Eisenstein was alive, judging by his works and behaviour... As for you, not only your researches are known all over the world, but you knew personally and were on friendly terms with many famous poets (such as Boris Pasternak, Anna Akhmatova, Iosif Brodsky, Boris Slutskij, David Samojlov, Ol'ga Sedakova...) and you do write poems.¹⁴ Pasternak in person analysed your poetry. We also remember Anna Akhmatova's phrase (which you have once mentioned in another interview): "You write poetry and study the Chinese language; you can be exposed at exhibitions!" In your book *Even and Odd*, you also analyse the leading role of different cerebral hemispheres in such spheres of activity as science and poetry: the left hemisphere (a "rational" one) deals with linguistic and logical information, while the right hemisphere is "specialised" in a more "concrete", figurative and poetical perception of the world. If we may ask, what could you tell us about your own cerebral activity, which cerebral hemisphere is dominant?

¹⁴ First V. V. Ivanov's poetry collection (*Poems of different years* [*Stihi raznyh let*]) was published in August 2005 (Ivanov 2005); besides, his poetry and poetic translations were included in the book Ivanov 2009 (pp. 36–78). Before that V. V. Ivanov published his poetry in the literary magazines *Zvezda*, *Kontinent*, *Novyj Mir*, as a part of his memoirs and essays and recited it at his poetry-readings.

V. V. I. According to the above-mentioned new approaches to the study of cerebral activity, the most important thing is the joint functioning of the both hemispheres. When I celebrated my 50th birthday, Andrej D. Sakharov wished me to aspire for a left and right harmony. For the last thirty years and more, I have been trying to achieve this as much as I could.

References

- Ivanov, Vyacheslav V. 1957. Lingvisticheskie vzgljady E. D. Polivanova. *Voprosy yazykoznanija* 3: 55–76.
- 1960. Nekotorye lingvisticheskie problemy, svyazannye s izucheniem afazii. In: Morozova, N. G.; Lubovskij, V. I. (eds.), *Tezisy dokladov tretej nauchnoj sessii po voprosam defektologii, 22–25 marta 1960 g.* Moskva: Izdatel'stvo APN RSFSR, 7–9.
- 1962. Lingvistika i issledovanie afazii. In: Moloshnaya, T. N. (ed.), *Strukturno-tipologicheskie issledovaniya*. Moskva: Izdatel'stvo AN SSSR, 70–95.
- 1972. Binarnye struktury v semioticheskikh sistemah. In: Blauberg, I. V. et al. (eds.), *Sistemnye issledovaniya: Ezhegodnik 1972*. Moskva: Nauka, 206–236.
- 1973. Znachenie idej M. M. Bakhtina o znake, vyskazyvanii i dialoge dlya sovremennoj semiotiki. *Trudy po znakovym sistemam (Sign Systems Studies)* 6: 5–44.
- 1976. *Ocherki po istorii semiotiki v SSSR*. Moskva: Nauka.
- 1978. *Chet i nechet: Asimmetriya mozga i znakovyh sistem*. Moskva: Nauka.
- 1997. Vstupitel'naya stat'ya k sborniku "Simpozium po strukturnomu izucheniyu znakovyh sistem". In: Nikolaeva, T. M. (ed.), *Iz rabot Moskovskogo semioticheskogo kruga*. Moskva: Yazyki russkoj kul'tury, 3–7.
- 1998. Nechet i chet. In: Ivanov, V. V., *Izbrannye trudy po semiotike i istorii kul'tury, Vol. 1: Znakovye sistemy. Kino. Poetika*. Moskva: Shkola "Yazyki russkoj kul'tury", 379–602.
- 2005. *Stihi raznyh let*. Moskva: Raduga.
- 2008. Dual'nye struktury v antropologii. Kurs leksij. Moskva: Izdatel'stvo RGGU.
- 2009. *Potom i opytom*. Moskva: Vagrius.
- 2010. *Izbrannye trudy po semiotike i istorii kul'tury. Vol 7: Iz istorii nauki 1*. Moskva: Yazyki russkoj kul'tury.
- 2011. *Izbrannye trudy po semiotike i istorii kul'tury. Vol 7: Iz istorii nauki 2*. Moskva: Znak.
- [Ivanov, Vyacheslav V.] 1962. Predislovie. In: *Simpozium po strukturnomu izucheniyu znakovyh sistem: tezisy dokladov*. Moskva: Izdatel'stvo AN SSSR, 3–9.

- Ivanov, Vyacheslav V.; Lotman, Juri M.; Pjatigorskij, Aleksandr M.; Toporov, Vladimir N.; Uspenskij, Boris A. 1973. Tezisy k semioticheskomu izucheniju kul'tur (v primenenii k slavyanskim tekstam). In: Mayenowa, M. R. (ed.), *Semiotyka i struktura tekstu: Studia poświęcone VII Międzynarodowemu kongresowi slawistów*. Warszawa, 1973. Wrocław: Ossolineum, 9–32. [Republished in English and Russian in *Tartu Semiotics Library* 1 (1998).]
- Krylov, Sergej A. 2007. Akademik Vyacheslav Vsevolodovich Ivanov: kratkij ocherk nauchnoj deyatelnosti. In: Nevskaya, L. G.; Pchelov, E. V.; Sveshnikova, T. N.; Herold, K. (eds.), *Vyacheslav Vsevolodovich Ivanov*. (Rossijskaya Akademiya nauk. Materialy k bibliografii uchenyh. Izdaetsya s 1940 g. Literatura i yazyk 30.) Moskva: Nauka, 8–37.

Интервью с Вячеславом Всеволодовичем Ивановым о семиотике, языках мозга и истории идей

Интервью с одним из основателей Тартуско-московской школы Вяч.Вс. Ивановым (род. в 1929 г.) состоялось в августе 2010 года. В нем говорится о многих ученых (включая Евгения Поливанова, Михаила Бахтина, Андрея Колмогорова, Николая Марра и др.), об отношениях Вяч.Вс. Иванова с его отцом, писателем Всеволодом Ивановым, о взглядах Вяч.Вс. Иванова на прошлое и будущее семиотики, на вопросы нейро- и зоосемиотики, семиотики культуры, кибернетики, лингвистики, на проблемы исследования и защиты малых языков. Кроме того, в интервью заходит речь о книге Вяч.Вс. Иванова *Чет и нечет*.

Intervjuu Vjatšeslav V. Ivanoviga semiootikast, aju keeltest ja ideede ajaloo

Intervjuu Tartu–Moskva koolkonna ühe rajaja, semiootik V. V. Ivanoviga (sündinud 1929) augustist 2010 kirjeldab Ivanovi seoseid mitmete teadlastega (Jevgeni Polivanov, Mihhail Bahtin, Andrei Kolmogorov, Nikolai Marr, jt.), suhteid isa, kirjanik Vsevolod Ivanoviga, aga samuti Ivanovi vaateid semiootika minevikule ja tulevikule, küsimusi seoses neurosemiootika, zoosemiootika, kultuurisemiootika, küberneetika, keeleteaduse ajaloo, väikeste keelte uurimise ja kaitse, ning tema raamatuga *Paaritu ja paaris*.