

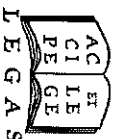
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THE IMPORTANCE OF SEMIOTICS TO UNIVERSITY: SEMIOSIS MAKES THE WORLD LOCALLY PLURAL

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Living systems function via the knowing process they are composed of. Life has been quite stable in the realm of iconic and indexical knowledge. The appearance of symbolic languages has detached the knower and the known, giving the knowledge a freedom to pose the problems that are independent from its function and thus creating an immense need for superfluous knowledge. However, a balance is sometimes possible also in a human culture. Once dealing with knowing itself, semiotics would naturally have the tools for understanding this. As an aspect of it, awareness on the role of semiotics may be relevant.

Position of semiotics in culture and in academe—and particularly its long-term position—is directly dependent on its position in University. Permanent position of a field in University assumes acknowledging and understanding of the deep content and function of the subject which in case of semiotics would derive from the study of semiosis and the study of its place in the world.

A gradualist view on history would describe the slight quantitative changes the percentage of semiotics in the curricula has undergone. A salationist view, instead, would dramatize the story. Since last two centuries, University has put an emphasis on teaching the expansion of technology, the invasion of the scientific, the artificial and the want-to-be-monistic. If this was the teaching of the Moderns, then the age after the Moderns is what stresses the diversity, meaningfulness (= plurality), and balancehood. This is the age of ecology and semiotics. Semiotics which has been taught for a long time as a supplementary course attached to linguistics, communication, cultural studies, biology, philosophy, or some other program, has developed its first independent full-scale programs in recent decades and demonstrates their stability. This is based on understanding the function of semiotics as the transdisciplinary basis for sciences (particularly for life sciences and humanities) that deal with knowing in a broad sense.

The importance of teaching semiotics has been focused already by Charles Morris (1946). Together with consolidation of semiotic conceptual fields, the role of semiotics in education has received a special attention, for instance in writings by Bense (1977), Sebeck (1979, 1989, 1994), Cunningham (1987a), Pelc (1992), Mosbach (1994), Nöth (2000: 533–536), Cobley (2000), Bouissac (2007), etc. There have been published particularly detailed reviews on teaching semiotics in German (Lange-Seidl 1983–1988; Stücker 1990, 1991; Hack

1992, 1993).¹

1. General assumptions

The role of semiotics in education and in the non-physical sciences is largely *independent* on whether semiotics is understood as a doctrine, or a methodology, or a field, or a science. This is because semiotics has widely and efficiently contributed to the modelling as such, as it is used in humanities and life sciences.

There is a certain deep analogy between the place of physics in natural sciences and the place of semiotics in the study of culture and life. The role of both is to provide a general theory, and the general methods of study. Physics and semiotics, being so fundamentally different, can serve as the bases for large domains of knowledge.

Knowledge naturally divides into knowing of *other* (which is physics, physical), and knowing of *self* (i.e., of knowing itself,² which is semiotics, semiotical). These are respectively the knowing of (every)thing, and the knowing of knowing.

Biosemiotics means the acceptance of non-propositional knowledge in addition to propositional knowledge, non-linguistic in addition to linguistic, knowing-how in addition to knowing-that, the body intelligence in addition to mental rational. Biosemiotics, in its large part, is a study of non-propositional knowing.³

Clearly understanding the position and function of semiotic knowledge—as the knowing of knowing (of all forms of knowing, from the level of a living cell to the level of arts)—it turns out to be possible to envisage the paths to put semiotics to fulfill the role it is meant to have.

This allows also to analyze the question about specialization to semiotics—about the possibility to become a professional semiotician, via studying semiotics from professional semioticians.

Semiotics is inherently transdisciplinary.⁴ It is not one speciality, it is many.

¹ See also an analysis of the concept of academic discipline in Posner 1988.

² Physics as the theory and study of structure and dynamics, and semiotics as the theory and study of sign relations, are in a large extent complementary approaches, physics building itself on the quantities, and semiotics on the qualities. However, this complementarity is strongly opposing—and overcoming—the cartesian dualism, because the mental can be understood as the conveyance of relations which is itself the life process. On the comparison of these, see Kull 2007.

³ On the distinction between the non-propositional and propositional knowledge as well as the concept of errors, see, e.g., Almeder 1999.

⁴ The approach here is largely in unison with the thoughts from the workshop "Semiotics: a highly needed transdisciplinary post-modern "science" in the knowledge society" held in Copenhagen in April 30, 2008, which included, among others, the papers "Semiotics and Academe: at the heart of the problem of knowledge" (John Deely), "Semiotics as a tool for transdisciplinary thinking uniting science and humanities" (Frederik Stjernfeld), etc.

Nevertheless, it is also semiotics. Thus it includes a deep contradiction, a challenge for all other specialties—because none of them can do without semiotics—and even a greater challenge to itself as how to be one if you are many.

2. Experience in teaching semiotics

"The university is perfused with signs, if it is not composed exclusively of signs.—Peircean communication"
Thomas Albert Sebeok 1991: 54

History of teaching semiotics can certainly be described in many different ways, particularly due to the ambivalence of identification of a course as a semiotic (particularly if it does not use that name, and in some cases also despite the name 'semiotic').

As a recent characterization of the situation, let me quote Marcel Darnesi who speaks about teaching semiotics in North America (Darnesi 1991):⁵

Even as we approach the end of the twentieth century, it seems that the mindset of North American university education has not as yet embraced the field of semiotics as part of the standard fare of course and program offerings. There are still very few universities on this continent which offer courses in semiotics, let alone specialization in the field. Graduate programs are virtually non-existent. A large part of this predicament has been due, no doubt, to the fact that the North American educational landscape has always been partitioned into clearcut disciplinary domains. As an interdisciplinary form of inquiry, semiotics has imply, never found a niche in this sectorialized territory.

One may get a slightly more optimistic impression from the article by Doris Mosbach (1994), who gives descriptions of semiotics programs in 19 places: Barcelona, Berlin, Bologna and San Marino, Brussels, Imatra and Helsinki, Ljubljana, Lund and Stockholm, Lyon, Odense, Perpignan, New Delhi, Sao Paulo, Sofia, Sydney, Tartu, Thessaloniki, Tokyo, Toronto, Warsaw. Besides the 12 European countries (Belgium, Bulgaria, Denmark, Estonia, Finland, France, Germany, Greece, Italy, Poland, San Marino, Spain), these include Australia, Brazil, Canada, India, and Japan. Mosbach adds (1994: 147):

Die meisten der vorgestellten Programme haben sich für ein gehobenes Einstiegsniveau der Studierenden entschieden. So wird Semiotik nach den hier vorliegenden Informationen nirgends propädeutisch oder im Grundstudium zum Schwerpunkt gemacht. Einzig in Tartu wird das Semiotikstudium als ein vollständiges Angebot, aber auch dort werden Vorkenntnisse und erste Erfahrungen im wissenschaftlichen Arbeiten vorausgesetzt."

The list given by Mosbach (1994) was probably not complete, and the situation has also changed for now, with some new centers added.

⁵ In that article, Darnesi (1991) reviews two books (Deely 1990, and Nöth 1990) as good sources for semiotics teaching.

2.1. The semiotics courses

Teaching of semiotics has a longer history. T. Sebeok (1991: 95) has stated his belief that "the very first sequence of courses in semiotics, so labeled, in any curriculum anywhere was offered by Charles Morris, beginning in the late 1930s, at the University of Chicago". Besides Sebeok himself, the other participants in the course, whom Sebeok could remember, were Walter Pitts (who became a collaborator of Warren S. McCulloch), science author Martin Gardner, and musicologist Leonard Meyer.)

Single courses on semiotics are taught nowadays in many universities of the world. These are often attached to communication and cultural studies programs, but sometimes also to the curricula of linguistics, biology, philosophy, marketing, etc.

After a peak popularity of semiotics in 1970s, followed by a decline in 1990s, notable signs of a new growth can be observed nowadays.

For instance, in Italy, by an initiative of the semiotics group in Bologna University, the proposal was made to introduce semiotics courses in seven other universities. This initiative, surprisingly, had unexpected results — a course of semiotics has been introduced into 90 universities of the country,⁶ One had to worry whether there can be found that many teachers.

However, in the Feltrinelli bookstore in the downtown of Bologna, one can see a whole shelf of books with the label "Semiotics (and linguistics)". Among these, there are simultaneously at least 6 different original introductory textbooks in semiotics, all in Italian, to my knowledge not translated into English.

In addition to the introductory courses and textbooks,⁷ there exist also some documentary films on semiotics that can be used in introductory courses. These include, for instance, (a) Roger Parent's video ("Cultures in conflict" 2004) of several series on the creativity of culture, based in large extent on Lotman's approach; (b) a new 60-min documentary "Lotman's world" (with A. Piatigorski, V. V. Ivanov, U. Eco, P. Torop and M. Lotman interviewed), (c) Elliot Gaines' documentary "Charles Sanders Peirce: Semiotics and the Logic of Pragmatism" from 2000; etc.

2.2. Semiotics as a source of ideas for education itself

Acquiring knowledge belongs most naturally into the subject field of semiotics (as, e.g., knowing of knowing),⁸ Donald J. Cunningham has guest edited a special issue "Semiotics and Education" of the *American Journal of Semiotics* 5(2), 1987. Cunningham (1987b: 214) writes:

⁶ Personal communication from Umberto Eco, August 2008.

⁷ On the introductory texts to semiotics, see also Kull, Salupere, and Torop 2005.

⁸ Incidentally, the very first article published in Tartu journal, *Sign Systems Studies* (*Teadus po znakovym sistemam*), dealt with semiotics of learning (I. Kull 1965; the first volume of *Sign Systems Studies* included a complete monograph by Juri Lotman).

For instance, in the classroom ... , both students and teachers seem genuinely unaware of the ideological forces which seem to be influencing their classroom discussions. Awareness of these forces and their consequences would allow both students and teacher to examine the roots of these forces and how their influence might be altered, if desired. It seemed to us that such freedom of inquiry should lie at the heart of our educational system. No goal is more important.

Cunningham adds (1987b: 214):

One can not talk for very long about signs without talking about how signs interrelate, how signs are used, how signs may be "read" or about awareness of sign process. It is precisely this interconnectedness, this web of interrelationships that leads me to characterize semiotics as a genuinely new way of thinking, a way of thinking that if adopted can not help but change the face of education.

What, then would education based upon semiotic insights look like? [...] The curriculum would emphasize ways of knowing not simply in the traditional verbal and mathematical modes, but in a variety of interconnected modes. Traditional subject matter boundaries would dissolve as it became clear that the ways of knowing in the humanities are not fundamentally different from the ways of knowing in the physical and social sciences. Students would not be taught *what* to think but *how* to think. In this view, schooling becomes an activity whereby we equip students with the wherewithal to deliberately and self-consciously construct the world in which they are to live. Teachers become models of semiosis and monitors of the student's ongoing semiosis. Schools become places where appropriate contexts for knowledge making are provided."

As Alex Gillespie (2007) says, semiotics provides a theory of and for self-reflection. Cunningham (1992: 445) remarks: "Reflexivity at its core is reflection about semiosis. [...] There is no more important educational goal than to turn our students into semioticians, to teach them to "read" the signs all about them." The American Educational Research Association has a fairly active special interest group "Semiotics and education", with a series of meetings and publications in the *International Journal of Applied Semiotics*.⁹ If semiotics may indeed grow the awareness of the communication, the self itself—this being both researcher and educator this will, above all, concern the semioticians and the students of semiotics themselves. Which means that they turn out to be the ones of the self of the culture—the agent that has no way not to signify.

2.3. Semiotics programs

When there is a course in semiotics, dealing mainly with semiotics of language and culture, but mentioning that the field actually covers more—then,

⁹ On the existence of similar activities in Europe, a recent symposium on the topic "Semiosis as a Foundational Concept for Education", 16–17 October 2008, in Ghent, Belgium, can be mentioned as an example.

quite naturally, wise students may ask about a course on zoo- or biosemiotics. And since there are not many people who can teach both semiotics of culture and biosemiotics, another course has to be introduced. So there are already two, which is clearly a step towards an entire curriculum in semiotics.

Currently, there are several centers in Europe in which semiotics is taught on the basis of extensive programs with many courses on the topic. These include University of Bologna (Italy), University of Tartu (Estonia), University of Helsinki (together with the institute in Imatra, Finland), and University of Aarhus (Denmark). There are also quite extensive semiotics programs in the New Bulgarian University (Sofia, Bulgaria), University of Perpignan (France), University of St. Petersburg (Russia),¹⁰ University of Bari (Italy), etc.

If teaching in a small culture (as, e.g., the Estonian), it enables to feel one's responsibility or the results of education very strongly. "The value of every individual is higher in a small cultural space, and maybe his/her influence on the surrounding is more permanent" (Torop 2000: 7). This also allows quite precisely to see the society's need for semioticians. Having already number of them who have graduated and found a job as a semiotician, we can observe how the semiotic knowledge is going to design the culture.

Since Tartu program is the largest and the only one that includes large part of biosemiotics and ecosemiotics, and which has already demonstrated its stability, it is worthwhile to make it known more widely as a topic for analysis.

2.4. The semiotics program in Tartu University

In 2009, the Semiotics Department in Tartu University includes 17 teachers, of these 2 full professors. The Department of Semiotics belongs to a bigger unit of Philosophy and Semiotics, and as a group to the Centre of Excellence in Cultural Theory.

The Department of Semiotics in Tartu is teaching semiotics in its full scope, from undergraduate to graduate to postgraduate years. The students learn semiotics as their major during at least 5 years, and if they complete their doctorate, then 9 — and there are at least 25 new students every year.

The current curriculum of semiotics is actually consisting of four curricula—bachelor, master, and doctoral studies, plus the international master program launched in the fall of 2009.¹¹ The courses these include are listed below:

Bachelor's program

- First year
- module I:
 - Basics of academic writing
 - Cultural histories

¹⁰ See Urekhin 2008.

¹¹ Välli and Kull 2008.

Intercultural communication
Introduction to philosophy
Key texts in the history of European ideas
module II:

Introduction to semiotics
History of semiotics
Introduction to culture studies
Logic
Introduction to research methods in semiotics

Second year

module I:

Biosemiotics and theories of living systems
J. Lotman and Tartu-Moscow Semiotic School
Semiotics of translation and the theories of translation
Theories of society, and semiotics
Traditions of semiotics
Research seminar

module II:

Analysis of culture
Ecosemiotics
Theories of everyday behaviour
Theories of text
Discourse theories and practices
Research seminar

Third year

module I:

Qualitative methods in semiotics
Semiotics of culture
Semiotics of language and theories in linguistics
Sociosemiotics
Zoosemiotics
Graduation seminar

module II:

Semiotic analysis of subcultures
Semiotics of art
Semiotics of city
Semiotics of landscape
Semiotics of literature
Graduation seminar

Optional courses:

Philosophy and methodology of science
Semiotic narratology
Semiotics of advertising and marketing
Semiotics of film
Semiotics of media
Semiotics of space
Theoretical semiotics

Graduation thesis or Graduation exam

Master Program

General Studies:

Current topics in selected fields of contemporary semiotics and culturology
Applied semiotics
Semiotics and methodology of sciences
Masters seminar

Specialty modules:

Disciplinary sociosemiotics
Disciplinary biosemiotics
Disciplinary semiotics of culture
Interdisciplinary socioanalysis
Interdisciplinary analysis of culture
Interdisciplinary ecology
Semiotics of text
Masters seminar

Optional courses:

Authorial semiotics
History of relations between culture and nature
Memory and culture
Narrative theory
Representation analysis
Semiotics of landscape
Semiotics of Tartu-Moscow School
Sociocultural semiosis
Theatre semiotics
Tourism semiotics and theories of tourism
Visual anthropology

Masters thesis:

Doctoral Program

Disciplinary semiotics and theory of culture
Transdisciplinary semiotics and theory of culture
Methodology of humanities
Methodology of semiotic analysis
Doctoral seminar

Practical teaching

Optional courses

Doctoral Thesis

International master program

General module:

History of semiotics: Basic concepts and classical works
Tartu-Moscow Semiotic School
Readings of J. v. Uekkill and J. Lotman
Methodology for semiotic analysis

Culture module:

Cultural semiotics and theories of culture
Semiotics of art
Semiotics of translation
Semiotic analysis of performance and multimodality

Nature module:

Biosemiotics
Ecosemiotics: Cultural interpretations of nature
Zoosemiotics: Umwelt and animal communication
Landscape semiotics

Society module:

Sociosemiotics and societal theories
Ideology and the concept of identity
Models of communication and mass media
Semiotic analysis of subcultures
Optional courses

Master thesis

As seen from above, the program is joining semiotics of culture, semiotics of nature, and semiotics of society. As compared to an early version of the program (see Randviir 1996), this has been one of emphases already since its introduction, but is further developed now.

There are several aspects that may need further attention. These include, for instance,

- (a) semiotics of law; however, there exists a special volume of the *International Journal for the Semiotics of Law* devoted to Tartu-Moscow school, guest edited by Tartu student V. Verenich (2005);
- (b) semiotics of economy (not just marketing and advertising, but economy as a whole);
- (c) semiotics of information technology (computer semiotics and computational semiotics);
- (d) medical semiotics (now covered by a web-base course);
- (e) semiotics and philosophy.

However, these topics are occasionally covered by the intensive courses given by visiting scholars.

As for conclusion on the curriculum, it should be said that this is not just

a program for interdisciplinary studies—this is more a transdisciplinary study. However, what makes semiotics special is that it is at the same time *semiotics* with its quite massive theory, history, and ambitions, with its own specific aim. In this way, we hope, it will be possible to avoid an expansion of semiotics—which may otherwise be a threat for a field of “as if almost everything”.

This building of semiotics, in Tartu case, has been put together from several components, among these,

- (1) semiotics as a theory of culture, supplied with philological scholarship (J. Lotman and his colleagues);
- (2) its connection to cybernetic thinking (earlier, e.g., via A. Kolmogorov), and a focus on modelling systems;
- (3) its attachment to contemporary science (for instance, I. Prigogine, and some versions of complex systems theory);
- (4) non-mainstream biology (Uekkill, later Copenhagen group);
- (5) American semiotics (Peirce, and Sebeok).

The background and the atmosphere of Tartu semiotics—its relationship to place, time, and the way that it lives—is described briefly in the chapter below.

2.5. A brief story of the Tartu school. Why in Tartu

The department of semiotics in the University of Tartu was established in 1992. Since 1993, there exists a study program in semiotics that has grown into one of the major semiotics programs in the world for 2009. This stands strongly on a long-term tradition, some roots of which can be described below.

(a) An old multilingual university

1632 was the year when the University of Tartu was established—as the second after Uppsala in northern Europe, and four years before Harvard. This was the year when João Poinsoit wrote his treatise on signs, and John Locke was born. Newton soon.

The Medieval tradition (inherently semiotic) was strong in this university. According to the existing knowledge, Tartu was the first university in the world in which the (then) anti-cartesian theory of Newton (*Philosophiae naturalis principia mathematica*, 1687) was taught.¹² According to Descartes, an interaction always requires the direct contact of bodies, whereas Newton stated that an interaction may take place without a contact.

Since when the word ‘semiotics’ was used is not remembered. The language of instruction was Latin, whereas Swedish and German were also used.

(b) Semiotics as a medical discipline taught in the 19th century

In the 19th century, the language turned into German—and the university

¹² See Vihalemm and Mäitsep 2007.

(then Dorpat as the German name of Tartu) became famous.

In the beginning of the 19th century, in 1800, the term 'biology' was coined by Karl Friedrich Burdach (followed by Lamarck), soon a professor in Tartu, and in 1802, the first professorship of semiotics in Tartu University was established. As in several other European universities, this belonged, naturally, to the faculty of medicine. Most of the period of its existence, the chair was called "Physiology, pathology, and semiotics".

In 1826, Karl Ernst von Baer (alumnus of Tartu University) was elected to this position of medical semiotics, but he could not come because he was just finishing his work "*Entwickelungsgeschichte der Thiere*" which became to mark the turn of the paradigm in biology—from preformation to epigenetics—the work that established developmental biology. But Baer came back to Tartu later.

(c) *Anthropology that includes both physical and cultural*

In the 19th century Europe, Baer was a leading scholar. His work included embryology, anthropology, and theoretical biology. He was one of the first who wrote about the ecological webs as the factor of ecological stability, and about the species-specific worlds of organisms. He introduced the concept of biological time. K. E. von Baer, being a forerunner of Darwinism,¹³ later became its major opponent. Jakob von Uexküll became his follower.

Baer was among the initiators of the first anthropological journal established in Europe—on physical anthropology. But he did also much work in the field of ethnology, studying traditional cultures in Siberia.

(d) *Non-mechanistic approaches—Uexküll*

The end of the 19th century marks the start of neovitalism—very much as a reaction to the growing mechanicism in biology. It is interesting to learn that in the first decade of the 20th century most of the leading biologists were supporting it, at least to the milder versions of neovitalism. It was an approach within which the holistic and pre-cybernetic concepts were developed.¹⁴ And so also Jakob von Uexküll.¹⁵

(e) *Heterochrony as a source for innovation*

Thure von Uexküll had an explanation for why the Baltic region distinguishes. He has pointed to the phenomenon of heterochrony—which is the situation where two systems in the different stage of development get into contact. As known from the description of macroevolution, most of the great evolutionary innovations in the history of life that led to the emergence of new

types of organic forms have been resulted from the contacts of this kind—from the communication of the very different in the situation of symbiosis. Of course, sometimes it just does not work. But if it happens to work, it creates something new. Similarly in case of cultures. Baltic region due to its agricultural economy still lived in Romanticism,¹⁶ whereas both the western Europe and Russia flourished in the industrial development, romantic ideals forgotten behind. The ideas of two ages could meet in the Baltic, and Jakob von Uexküll happened to be at that right place.

A lesson from this is obvious—slow down your speed, and you find something new in your surrounding. This is exactly how the human species has been created—via neoteny, or slowing down the speed of ontogenetic development. The brain is still slowly growing, but that is not the mother's body around the baby, but a harsh environment instead, where there is so much new to learn.

(f) *Non-darwinian approaches that connected biology with general linguistics*

Interestingly enough, for Roman Jakobson (who was an influential figure for Tartu semiotics), two scholars—Karl Ernst von Baer, and another non-darwinian evolutionist, a Russian scholar Lev Berg (the author of nomenclature concept)—have been the major sources for working out his approach to linguistics during his years in Prague.¹⁷

General linguistics itself had a strong early tradition in Estonia, for instance due to Jan Baudouin de Courtenay, who has worked in Tartu in 1883–1893, and via the works of Jakob Linzbach (Revzin 1965).¹⁸

In the end of the 19th century the official language of Tartu University turned into Russian. In 1920, it turned again—into Estonian.

(g) *Epigenetic episteme*

In the history of the western biological thought, one of its major characteristics is the regular alteration between the ages of preformation and epigenetics. Preformation prevailed in the 18th century. An epigenetic period started with Baer, and lasted until 1930s, with the Modern synthesis, since when the Darwinism was accepted by the community of biologists together with the genetic preformation which became a dominant view. In the first decade of the 21st century, we can observe a turn again—a new start of epigenetic understandings. Uexküll was clearly a son of epigenetic era.

Epigenetics is a very special approach in biology. What concerns evolution—it is an evolutionism, but strictly a non-darwinian evolutionism—because it does not see the natural selection (or a blind watchmaker) as a major

³ In the introductory chapter to the *Origin of Species*, Charles Darwin mentions nine scholars who had developed the theory of evolution before him. Among these nine, surprisingly enough, two came from Tartu: Alexander Keyserling and Karl Ernst von Baer.

¹⁴ See also Magnus 2008.

¹⁵ See Kull 2001, and Mildemberger 2007a.

¹⁶ Romanticism itself can be seen as a critique of Moderns inside the Modern. The continuation of namely this approach has developed a dissident tradition that has had several further forms in the 20th-century Tartu.

¹⁷ Patrik Seriot (2001; 2003), from the University of Lausanne, Switzerland, has written about this little but highly interesting chapter in the history of semiotics in detail.

¹⁸ On some other figures, see Mildemberger 2007b.

factor in evolution. Neither is it Lamarckian. Neither creationist. The principle is simple — life is itself its designer. Semiosis is the one that designs semiosis. Sometimes intelligently, sometimes not so intelligently.

(b) *Lotman and establishing the cultural semiotics—Tartu and Moscow*

In 1950, Juri Lotman came to Tartu. For him, periphery was probably the only place where he could so productively develop his semiotic views—where ideology has not so strong dominance, where there is a little less communication, less unification.

In 1960s, Lotman, together with his colleagues from Moscow, set the foundations for semiotics of culture—for which the explanation of the periphery and center, and the boundaries as the points of creativity have been among its major focus (Uspenskij *et al.* 1973). The place where this approach has been developed—Estonia—is historically very rich in various types of boundaries. In 1964, Juri Lotman established the journal *Sign Systems Studies*—the oldest semiotic journal in the contemporary Babel of scientific publications.

The tradition established by Juri Lotman is certainly of the central importance and the major source of the contemporary semiotic work in this university.¹⁹

(i) *Modelling systems—Lotman and Sebeok*

The concept of modelling system, as developed in the Tartu-Moscow school, was defined as “a structure of elements and rules for combining them that is in a state of a fixed analogy to the entire sphere of an object of knowledge, insight or ordering. Therefore a modeling system can be regarded as a language” (Lotman 1967: 130; see also Lotman 1977).

Within the modelling systems as languages, the primary and the secondary ones were distinguished: “Systems that have a natural language as their basis and that acquire supplementary superstructures, thus creating languages of a second level, can appropriately be called secondary modelling systems” (Lotman 1967: 131).²⁰

Sebeok, when using this concept, made a point that all organisms make use of models, however, of a different type. According to Sebeok, any Umwelt-building is simultaneously a model-building. He called the biological modelling systems the primary. Still I do not think that it is necessary to abandon the old terminology, because the primary and secondary modelling systems according to Lotman are both the subclasses of the sphere of human language, whereas the dividing line between non-human and human is of more fundamental order. Which simply means that both—Lotman and Sebeok—are right.

¹⁹ See also Andrews 2003, Torop 1998, and Kull and Lotman 1995.

²⁰ This distinction has already been described in the introductory text “From the editors” in *Truki po znakovym sistemam (Sign Systems Studies)* 2: 6 (1965). See also Levchenko and Salupere 1999.

In 1980s, with introducing the concept of semiosphere, Lotman, and Tartu semiotics altogether, moves towards a wider understanding of semiotics (Mandelker 1994; Sebeok 1998; Kull 1999; Torop 2005).

(j) *Biosemiotics — Tartu and Copenhagen*

The end of 1980s meant a period of crucial changes in the map of Europe. For Tartu, it meant a start of regular and intensive contact with the western world.

The Department of Semiotics was established (in 1992) and started to grow.

English language replaced Russian, and a wider reading of Charles S. Peirce started.

Sebeok visited Tartu again couple of times (in 1997, 1999),²¹ as well as many other leading semioticians of the world, and Tartu semioticians started to travel around.

At a conference in Glottertal, Germany, organised by Thure von Uexküll and Thomas Sebeok in 1993, Copenhagen and Tartu biosemioticians first met, which resulted a productive co-work and the formation of an international working group in biosemiotics.

(k) *Culture and ecosystem fuse*

An interesting special consequence from the contact of semiotics of culture and biosemiotics has been ecosystemics. When we first met with Winfried Nöth in Toronto (at the meeting “Semiosis, Evolution, Energy”), in 1997, he gave a paper on ecosystemics, and I asked him the text for publishing it in *Sign Systems Studies*. I wrote another one, and in the next years we had a series of conferences in Tartu and sessions in Imatra on the topic.²² If defined as a field that focuses on the semiotic aspects of the role of nature for cultures, it fits very well for the students who may not have a professional background in biology, but know well the theory of culture and are interested in ecology. In Tartu, this led to a co-work with human geographers (whose attachment to semiotics seems to be growing worldwide), and the ecosystemic summer-seminars every year.

However, this has also a deeper theoretical side—the extended notion of culture. Culture is a process that includes the relations in the ecosystem in which humans live.

(l) *Semiotic analysis of local cultural conflicts*

Semiotic analysis has to discover how a concrete sign works. Interestingly enough, semiotic analyses of conflict cases quite often provide useful solutions, despite of the fact that the methods of semiotic analysis are still rather restricted and not well systematized. Different schools of semiotics use still very different models as tools in the analysis.

²¹ On Sebeok's relationships to Tartu, see Sebeok 1987 and 1998.

²² See Nöth and Kull 2000.

Semiotics Department receives regularly requests to provide a semiotic analysis in various difficult cases. For instance — in several cases these were conflict situations with some monuments that had contrasting ideological interpretations. There have also been questions on the conflicting interests in either political or commercial advertisements. But it has also been problems as how to define the concept of Estonian food, or how to make a brand that will work.

Due to its size, Estonia may serve as a *test-site* for semiotics. There are 1.3 million people. Most people with high education have heard of semiotics. Semioticians are met as people of knowledge, and thus they get good jobs with this label in their diploma.

(m) *The culture of bibliophily*

The specialized semiotics library at the Semiotics Department, together with the collection at the main library of Tartu University, has a remarkably rich collection of the semiotic literature of the world, including the sets of quite rare publication series. In addition, Jakob von Uexküll Centre in Tartu has the complete set of Uexküll's works, plus some archive materials. The Estonian Semiotics Repository owns Juri Lotman's complete library. The Semiotics Department stores the memorial biosemiotic library of Thomas A. Sebeok.

Tartu University Press publishes several publication series in semiotics. These include:

- (a) the international journal *Sign Systems Studies* (established by Juri Lotman in 1964, currently the oldest semiotics scholarly journal in the world),
- (b) an international book series *Tartu Semiotics Library* (established in 1998, with ten volumes published since then),
- (c) a book series *Dissertationes Semioticae Universitatis Tartuensis* for doctoral dissertations in semiotics defended in Tartu University (established in 2000, with eleven volumes published since then),
- (d) an electronic journal *Hortus Semioticus* (established in 2006, three volumes published since then),
- (e) the journal of the Estonian Semiotics Society, *Acta Semiotica Esnica* (established in 2001, five volumes published since then).

3. The function of semiotics as a basis of pluralist approach

What has to be taught when teaching professional semioticians? Obviously, entire semiotics, and semiotics as a profession. This includes at least three tasks:

- (1) teaching the semiotics itself;
- (2) compiling the semiotics as a (plural and long-term) whole;
- (3) placing the work of semiotics in the society, in a local ecosystem; semiotics obviously cannot live without a stable function in it.

Recently I had a conversation with Umberto Eco, where a definition and

fate of semiotics came up once again. Eco claimed that semiotics is similar to medicine—because semiotics is defined via its aim, and not via its method. The aim of medicine is obviously to understand disease—and to help people with healthiness. Many methods go. The aim of semiotics, in Eco's words, is understanding signification. And accordingly, to help people with ... Many methods go.

Concerning the near future—Eco expected that much of philosophy will flow into semiotics. Semiotics is fusing with cognitive science, the problems of cognition becoming more central in semiotics.

The aim of semiotics is certainly not to canonize its word, its terms. Instead, it is about how to share the understanding. Since the qualitative diversity and translation are the sources of creativity, and of knowing.

Lotman liked to emphasize that the requirement for a meaningful communication is the difference between the people. Whereas not just any difference, but a difference what is also a difficulty. Non-translatability is a *sine qua non* for a creative, meaningful life, a necessary requirement of diversity.

This, interestingly enough, infers the non-unification of science. *Science should not be unified*. One may only think about unification that would cover, for instance, soil science, ornithology, political economics, literature studies and archeology. Application of identical models to all these fields would be ridiculous.

This paradoxically means that semiotic models have to include an essential non-convertibility. Their role is — in its basis — to describe nothing less than the logical contradictions. Because contradictions are ontologically together with knowing, and for semiotics as knowing of knowing it should be the object.

What is going to unite sciences of culture and life then, is pluralism! But there is more in semiotics than pure pluralism—there is complementarity—very much in the sense of Niels Bohr. While the contemporary physics has been able to abandon Bohr's complementarity on the level of understanding the physical processes, then semiotics should never do so. This allows semiotics to serve also as an approach that can describe the whole of knowledge, in which physics, together with all the method of natural science, is a special case.

4. Some tasks for semiotic theory

Here belong the challenges, and also results, that the contemporary integration of semiotics—integration between semiotics of culture and biosemiotics—has provided.

Perhaps there are (at least) two fundamental questions that can be solved (and in some extent have been solved already) as a productive consequence of this integration.

First is the question on the existence of diversity as such (of species of various kind) as a result of sign action. Why there are species in the living world? This question applies throughout the living world, including the human cultures and languages. Anywhere, where a communication in the living occurs,

in the semiosphere *sensu lato*, it creates diversity, the species and cultures and subcultures etc., that hold together and separate themselves from the else. This is the diversity of signs systems that lays on the basis of biodiversity, as well of cultures, a difficulty of translation accompanying this diversification, which turns out to be the major value in the world of life at the same time.

Second is the question on existence of signs, or of plurality. Why there are signs? Which is also about the nature of information—why and when there is information in the world. We know in semiotics now already quite well, *what* sign is. But *why* there is semiosis? Here is a touch of the plurality as referred in the title of talk, in its profound sense. Semiosis creates objects, and makes each object plural. Each is sign, which means each is simultaneously something else, each is many.

The existence of diversity (that there are many species of things), and the existence of plurality (that each object is plural), are both due to semiosis. (But both of these problems will require a separate paper.)

If the first question is one for which biosemiotics has full tools, then the second goes partly beyond its limits. This is because here some physics is required, too.

Communication creates diversity, but it also destroys it if there is too much of it. Because, the standardization and homogenization are also results of communication.

Therefore, not only the periphery but also specialization have its importance in order to find an optimal level of independence and connectedness, between one and many.

5. Finis—life in an organic balance

Likewise an ecosystem requires an evolution before it reaches its gentle (and always vulnerable) sustainability, an analogous is true for any human culture. In the “Universe of the Mind”, Juri Lotman has remarked (2000: 35):

But we are still a long way from being able to make any well-grounded prognosis of the optimal structures of culture. Until that time we must understand and describe their mechanism, at least in its most typical manifestations.

Something similar has been said by Jakob von Uexküll when he envisioned the main task for a researcher of life to be the understanding of the music, of the concert of life.

A unique feature of us after becoming humans, or the symbolic species, as Terrence Deacon (1997) says, or the semiotic animal, which is John Deely's and Susan Petrilli's term (2005), is responsibility. Including the responsibility of teaching semiotics. When freedom—the semiotic freedom, using Jesper Hoffmeyer's concept (e.g., 2008)—grows, also our responsibility—in semio-ethical sense, as John Deely and Susan Petrilli are using the concept, and especially the responsibility of us, semioticians—grows. Responsibility of having

communication, having diversity, but not too much of communication which would destroy the diversity. This is the responsibility on the fate of love in the world.*

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SEMIOTIC THEORY AND HUMAN INTELLIGENCE 52

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The classic Greek philosophers were driven by a passion not simply to understand the world, but equally to use that understanding in pursuit of the good life—a life both internally virtuous and externally successful. Two grand aims—right thinking and right living—were linked, but achievable only through arduous and determined pursuit. Knowledge of reality and the good life were pursued by the pre-Socratics—Thales, Heraclitus, Parmenides, Democritus—and with greater force and systematicity by the classics—Socrates, Plato, and Aristotle.

For Socrates (469–399 BC), the quest for understanding began with an admission of ignorance. Underlying all his teaching was the axiom that commonsensical beliefs are routinely deeply flawed. By necessity, the quest for truth was a dialogic process sustained by the hope for progress toward understanding, not the attainment of certain knowledge. Socrates' contemporaries, the Sophists, likewise believed that certain knowledge was not attainable—a conclusion rediscovered by the empiricists—Locke, Berkeley, and Hume—more than a thousand years later. Both Socrates and the Sophists also believed that knowledge was not to be regarded as an end in itself but was above all the means to live a good life. For the Sophists, the good life was a successful life, and knowledge was a tool for the achievement of worldly success. Socrates, too, believed that knowledge was essential to the good life, but the good life was understood differently to be a life of virtue. True knowledge was attainable only through arduous pursuit—ideally, a joint pursuit with those like-minded.

Like his teacher Socrates, Plato (427–347 BC) believed that truth is elusive. This conviction was vividly illustrated in the Allegory of the Cave. Its point is that reality is not immediately accessible; instead, divine essences lie behind things observable in the tangle world. To lay hold of a deeper reality, to grasp true knowledge, required *eros*—the passion to understand. Insight into the divine essences is achieved through a re-union of enduring ideas once known but forgotten. The dialectic entailed self-critical knowledge and insight—spontaneous recognition, or epiphany, of the enduring logic of the cosmos, the Universal Logos, that was resident in both the mind and the world. Plato's thinking held ideas in common with the Pythagoreans—that the cosmological order and the order within were identical. Another similarity is that the pursuit of understanding was the true path to attainment of immortality and divine status (like Pythagoreans), in contrast to Homerians who starkly divided the gods and humanity.