

University of Tartu

Σημειωτική

Sign
Systems
Studies

28

Тартуский университет
Tartu Ülikool

Труды по знаковым системам
Töid märgisüsteemide alalt

28

Тарту — Tartu
2000

University of Tartu

Sign Systems Studies

volume 28

Editors: Peeter Torop
Michail Lotman
Kalevi Kull

 TARTU UNIVERSITY
PRESS

Tartu 2000

Sign Systems Studies is an international journal of semiotics and sign processes in culture and nature
Periodicity: one volume per year
Official languages: English and Russian

Established in 1964

Address of the editorial office:

Department of Semiotics
University of Tartu
Tiigi St. 78,
Tartu 50410, Estonia
e-mail: semiotics@ut.ee

Information and subscription:

<http://www.ut.ee/SOSE/sss.htm>

Assistant editor: Silvi Salupere

Editorial board:

Irina Avramets
Jelena Grigorjeva
Ülle Pärli
Anti Randviir

The publication has been supported by the Estonian Science Foundation and the Estonian Ministry of Education

© University of Tartu, 2000

ISSN 1406-4243

ISBN 9985-56-542-8

Tartu University Press
Tiigi 78, Tartu 50410, Estonia
Order No. 688



*A chine Mr. T. Sebeok
Juri Lotman*

Juri Lotman and Thomas A. Sebeok in Bergen, Norway, during Lotman's first journey ever to the West (October 3, 1986).

Table of contents

Peeter Torop, Mihhail Lotman, Kalevi Kull

Intercommunication: Editors' comments	11
---	----

General semiotics

John Deely

Semiotics as a postmodern recovery of the cultural unconscious	15
---	----

Семиотика как переоткрытие бессознательного культуры в постмодернистскую эпоху. <i>Резюме</i>	47
--	----

Semiootika kui kultuuri mitteteadvuse uuestiavastamine postmodernistlikul ajajärgul. <i>Kokkuvõte</i>	48
--	----

Winfried Nöth

Umberto Eco's semiotic threshold	49
--	----

“Семиотический порог” Умберто Эко. <i>Резюме</i>	60
--	----

Umberto Eco “semiootiline lävi”. <i>Kokkuvõte</i>	61
---	----

Jaakko Hintikka

Language as a “mirror of nature”	62
--	----

Язык как “зеркало природы”. <i>Резюме</i>	71
---	----

Keel kui “looduse peegel”. <i>Kokkuvõte</i>	72
---	----

Frederik Stjernfelt

Mereology and semiotics	73
-------------------------------	----

Мереология и семиотика <i>Резюме</i>	98
--	----

Mereoloogia ja semiootika. <i>Kokkuvõte</i>	98
---	----

Semiotics of culture**Marcel Danesi**

A note on Vico and Lotman: Semiotics as a “science of the imagination”	99
Заметки о Вико и Лотмане: семиотика как “наука воображения”. <i>Резюме</i>	114
Vico ja Lotman: semiootika kui “kujutlusteadus”. <i>Kokkuvõte</i>	115

Peeter Torop

Интерсемиотическое пространство: Адрианополи в Петербурге “Преступления и наказания” Ф. М. Достоевского	116
The intersemiotic space: Adrianopol in F. Dostoevsky’s “Crime and punishment” St. Petersburg. <i>Abstract</i>	116
Intersemiootiline ruum: Adrianopol F. Dostojevski “Kuritöö ja karistuse” Peterburis. <i>Kokkuvõte</i>	133

Dinda L. Gorfée

Text semiotics: Textology as survival-machine	134
Семиотика текста: текстология как машина выживания. <i>Резюме</i>	156
Teksti semiootika: tekstoloogia kui ellujäämismasin. <i>Kokkuvõte</i>	157

Thomas G. Winner

Czech and Tartu–Moscow Semiotics: The Cultural Semiotics of Vladimir Macura (1945–1999)	158
Чешская и Тартуско–Московская семиотика: культурная семиотика Владимира Мацеры (1945–1999). <i>Резюме</i>	179
Tšehhi ja Tartu–Moskva koolkonna semiootika: Vladimír Macura (1945–1999) kultuurisemiootika. <i>Kokkuvõte</i>	180

Tomi Huttunen

- От “словообразов” к “главокадрам”:
имажинистский монтаж Анатолия Мариенгофа 181
- From “word-images” to “chapter-shots”:
The imaginist montage of Anatolij Mariengof. *Abstract* 181
- “Sõnakujunditelt” “peatükikaadriteni”:
Anatoli Mariengofi imajinistlik montaaž. *Kokkuvõte* 198

Irina Avramets

- Жанровая дефиниция произведений Достоевского 199
- On the definition of genre of Dostoevsky’s works. *Abstract* 199
- Dostojevski tekstide žanrimääratlus. *Kokkuvõte* 215

Michail Lotman

- Русский стих: метрика, системы стихосложения,
просодия (генеративный подход) 217
- Russian verse: Its metrics, versification systems, and prosody
(Generative synopsis). *Abstract* 217
- Vene värss: meetrika, värssüsteemid ja prosoodika
(generatiivne ülevaade). *Kokkuvõte* 241

Marina Grishakova

- V. Nabokov’s “Bend Sinister”:
A social message or an experiment with time? 242
- “Bend Sinister” Вадимира Набокова:
социальное сообщение или эксперимент со временем?
Резюме 262
- V. Nabokovi “Bend Sinister”:
sotsiaalne teade või eksperiment ajaga? *Kokkuvõte* 263

José Sanjinés

- The book at the outskirts of culture:
Cortázar’s first almanac 264
- Книга на периферии культуры:
первый альманах Кортасара. *Резюме* 279
- Raamatud kultuuri perifeerias:
esimene Cortazari almanahh. *Kokkuvõte* 280

Linnart Mäll

On the concept of humanistic base texts	281
О концепции базовых гуманистических текстов. <i>Резюме</i>	287
Humanistlike baastekstide kontseptsioonist. <i>Kokkuvõte</i>	288

Ecosemiotics

Roland Posner

Semiotic pollution: Deliberations towards an ecology of signs	290
Семиотическое загрязнение: размышления об экологии знаков. <i>Резюме</i>	307
Semiootiline saastamine: mõtisklus märkide ökoloogiast. <i>Kokkuvõte</i>	308

Dagmar Schmauks

Teddy bears, Tamagotchis, transgenic mice: A semiotic typology of artificial animals	309
Плюшевые медведи, тамагучи, трансгенные мыши: семиотическая типология искусственных животных. <i>Резюме</i>	324
Plüüskarud, tamagotchi, transgeensed hiired: tehisloomade semiootiline tüpologia. <i>Kokkuvõte</i>	325

Biosemiotics

Kalevi Kull

An introduction to phytosemiotics: Semiotic botany and vegetative sign systems	326
Введение в фитосемиотику: семиотическая ботаника и вегетативные знаковые системы. <i>Резюме</i>	350
Sissejuhatus fütosemiootikasse: semiootiline botaanika ja vegetatiivsed märgisüsteemid. <i>Kokkuvõte</i>	350

Felice Cimatti

- The circular semiosis of Giorgio Prodi 351
 Циркулярный семиозис Джорджио Проди. *Резюме* 378
 Giorgio Prodi tsirkulaarne semioosis. *Kokkuvõte* 379

Aleksei Turovski

- The semiotics of animal freedom:
 A zoologist's attempt to perceive the semiotic aim of
 H. Hediger 380
 Семиотика животной свободы:
 попытка зоолога понять семиотическую цель
 Х. Хедигера. *Резюме* 387
 Loomse vabaduse semiootika:
 zoologi katse mõista H. Hedigeri semiootilist eesmärki.
Kokkuvõte 387

Myrdene Anderson

- Sharing G. Evelyn Hutchinson's fabrication noise 388
 Разделяя "фабрикационный шум" Г. Ивлины Хатчинсона.
Резюме 396
 Osasaamine G. Evelyn Hutchinson'i "valmistusmürast".
Kokkuvõte 396

Sabine Brauckmann

- Steps towards an ecology of cognition:
 A holistic essay 397
 Шаги к экологии познания:
 холистическое эссе. *Резюме* 419
 Teadvustuse ökoloogia poole:
 holistlik esse. *Kokkuvõte* 420

Reviews

Winfried Nöth, Kalevi Kull

Discovering ecosemiotics 421

Anti Randviir, Eero Tarasti, Vilmos Voigt

Finno-Ugric semiotics: Cultures and metacultures 425

Intercommunication: Editors' comments

The meaning of semiotics is to provide theoretical insights and to develop the means of analysis for the whole area where sign systems have a significance. This includes a vast region of our world, and a great part of scientific inquiry. Thus, the importance of this domain of knowledge cannot be changed by fashion, and whatever shifts may occur in popular words or fashionable research, this is no more than a further subject for research in sign systems.

The current volume of *Sign Systems Studies* marks several noticeable events.

The inside-outside communication of the Tartu school of semiotics has been (re)established in a mode which gives us the confidence for multilateral communication, and a responsibility in the continuation of the oldest regular publication in the field of semiotics, as established by Juri Lotman in 1964. The signs of this are, on one hand, the publication of *New Tartu Semiotics* (Bernard *et al.* 2000), and, on the other hand, the regularity of publication and the authorship of *Sign Systems Studies*. In addition to the series *Tartu Semiotics Library* (cf. Andrews 2000), since this spring, *Dissertationes Semioticae Universitatis Tartuensis* has been born. The formation of Finno-Ugric 'semiotic league' (Randviir & Voigt & Tarasti, this volume) is left as last, but this is not the least to mention.

The year 2000 denotes the importance of Thomas A. Sebeok's impact on the semiotics of the last half century. The biosemiotic part of this volume is in its entirety, although indirectly, initiated by him.

With the following comments, the editors would like to draw a few additional parallels in order to help the readers to find the interconnections which might be useful both for better understanding of the subject and for further endeavours in this field.

First, we continue publishing works on theoretical and general problems of semiotics. The papers by J. Deely and J. Hintikka both emphasise the importance of mutual reacquaintance between semiotics

and philosophy, although approaching this from different sides. F. Stjernfelt demonstrates the use of it via his analysis of mereological concepts.

F. Stjernfelt's paper on mereology will be interesting to interpret in the context of the distinction made by S. Meyen between taxonomy and meronomy and, accordingly, between taxon and meron. 'If taxonomy operates with taxa, then meronomy with merons (parts). The concept of taxon means a set of objects, united by common traits. The concept of meron means a set of parts, belonging to these objects and having some common traits, i.e., the concepts of meron and trait are different' (Meyen 1977: 29; cf. also Schreider 1983, and Kull's paper in the current volume). Some of the background of the Russian biological structuralism, from where the concept of meronomy originates, has been described by P. Sériot (1995). The topic of holism is also analysed in the ('Tartu') paper by S. Brauckmann in this volume.

When M. Danesi in his article states that, 'In my view, the integration of Vico and Lotman will allow semiotics to develop a truly powerful investigative method for unravelling one of the greatest conundrums of all time: How did the mind, language, and culture come into existence?'; this seems to mark a strangely creative field. And when W. Nöth discusses with U. Eco about the placement of the semiotic threshold, then this is also a discussion with J. Lotman in a direction that would certainly have enchanted him.

Thus, second, or better to say 'the first', is our endless and central interest in the semiotics of culture, both elsewhere or here, on the spot. The intersemiotic space, which draws together the terms of J. Lotman and J. Kristeva, is structured, here, via the approaches of P. Torop and D. Górlée. The semiotic theory of poetic text reaches its next chapter via the article by M. Lotman, and the semiotics of literature is advanced by J. Sanjinés, T. Huttunen, M. Grishakova and I. Avramets. The oriental theme, as a traditional topic in *Sign Systems Studies* since its first years, is represented by our old author L. Mäll. T. G. Winner admits the intercultural aspects.

Mixing and fusion of the borders and boundaries in the contemporary world goes hand in hand with the seeking of identity and with the need for borders. However, it is not easy to recognise the borders which appear in the course of the interaction of these two tendencies. Here, semiotics of culture has its advantage. The controversial cultural experience is characterised not only by its reality, but also by texts of culture.

Semiotics of culture is suitable for joining different disciplines which are studying culture, operating as a base science for them. Since no integrated science of culture exists, the onus falls on cultural semiotic studies to develop both the empirical analysis and methodological research of culture. Both of these topics make up the section of 'semiotics of culture' in our journal, now, and in the future.

Ecosemiotics is also an important field of attention in regard to the current trends in semiotics on the pages of *Sign Systems Studies*, or for representing a developing link between the semiotics of culture and the semiotics of nature. It has been started in volume 26, and will certainly have a follow-up in the next volumes. Here, the contribution by D. Schmauks gives the first review about artificial animals in a semiotic context. It is interesting to refer, here, to a short paper by J. Lotman (1978), in which a somewhat analogical topic has been discussed. R. Posner's more general approach provides a starting point for studies in semiospheric pollution.

The collection of papers on biosemiotics, included here, represents the first attempt to review the important chapters of the history of biosemiotics proper. In this context, Cimatti's paper about Giorgio Prodi, and Turovski's one about Heini Hediger, give the first accounts of these two figures who laid the basis for biosemiotics. A large special issue of *Semiotica* about Jakob von Uexküll is forthcoming. According to T. A. Sebeok (2001), it was namely Uexküll, Hediger, and Prodi, who first developed biological semiotics and laid a valuable foundation for it. Besides these three, and Thomas A. Sebeok himself, of course, there are many other figures in the history of biosemiotics who deserve attention. Thus, the chapter also includes analyses of the works and views of G. Evelyn Hutchinson (by M. Anderson), Gregory Bateson (by S. Brauckmann), and Martin Krampen (by K. Kull) in respect to their impact on the development of biosemiotics.

A remark may be made about the incompatibility and (un)relatedness of the concepts of *Umwelt* and *niche*. Hutchinson's concept of 'niche' seems to be in a way analogical to Richard Woltereck's concept of 'reaction norm'. Namely, both of these, attempting to explicate a formerly fuzzy biological term, have given a precise definition which includes an extension to the n -dimensional space of the environment, whereas n happens to be uncountable. With this, both concepts have been extended beyond the limits of a methodology of natural science, and have started to drive (probably without such a conscious intention by their authors) towards bridging biology with semi-

otics. Thus, an additional argument for including the paper on Hutchinson into the current issue.

Ab actu ad posse valet illatio.

References

- Andrews, Edna 2000. The Tartu school at the end of the twentieth century. *Semiotica* 131(3/4): 267–271.
- Bernard, Jeff; Cernov, Igor; Salupere, Silvi and Torop, Peeter (eds.) 2000. New Tartu semiotics. *European Journal for Semiotic Studies* 12(1): 1–230.
- Lotman, Juri 1978. Kukly v sisteme kul'tury. *Dekorativnoe iskusstvo SSSR* 2, 36–37.
- Meyen, Sergey V. 1977. Taksonomiya i meronomiya. In: *Voprosy metodologii v geologicheskikh naukah*. Kiev: Naukova Dumka, 25–33.
- Schreider, Julij A. 1983. Sistematika, tipologiya, klassifikatsiya. In: Schreider, J. A. and Shornikov, B. S. (eds.), *Teoria i metodologiya biologicheskikh klassifikatsij*. Moskva: Nauka, 90–100.
- Sebeok, Thomas A. 2001. Biosemiotics: Its roots, proliferation, and prospects. *Semiotica* (special issue about Jakob von Uexküll, forthcoming).
- Sériot, P. 1995. Lingvistika i biologiya. U istokov strukturalizma: biologicheskaya diskussiya v Rossii [Linguistics and biology. At the sources of structuralism: biologists' controversy in Russia]. In: Stepanov, Y. S. (ed.), *Yazyk i nauka kontsa 20 veka*. Moskva: RGGU, 321–341.

*Peeter Torop
Michail Lotman
Kalevi Kull*

Semiotics as a postmodern recovery of the cultural unconscious

John Deely

University of St. Thomas,
3800 Montrose Boulevard, Houston, Texas, U.S.A.
e-mail: deelyj@stthom.edu

Abstract. This essay explores the terminology of semiotics with an eye to the historical layers of human experience and understanding that have gone into making the doctrine of signs possible as a contemporary intellectual movement. Using an essentially Heideggerian view of language as a heuristic hypothesis, the name *semiotics* is examined in light of the realization that only with Augustine's Latin *signum* was the possibility of a general doctrine of signs introduced, and that first among the later Latins was the idea of sign as a general mode of being specifically verifiable both in nature and in culture in establishing the texture of human experience vindicated according to an explanation of how such a general mode of being is possible. The contemporary resumption through Charles Peirce of the Latin line of vindication completed especially by Poincaré is explored along these same lines in terms of considerations of why the term *semiotics* has emerged as, so to speak, the *logically proper name* of the global interest in signs.

As Galileo and Descartes experienced their situation, the new learning was to be a turning away from authority based on the interpretation of linguistic texts to establish a new authority based on experimental results expressed in mathematical reasoning. At the beginning the two tried, as it were, to walk arm in arm, to stand shoulder to shoulder in a war to delegitimize the mentality and methods bizarrely canonized centuries after the fiasco in the person of "saint" Robert Cardinal Bellarmine, Rome's own Torquemada.

But soon enough, in spite of themselves, the followers of these two found themselves parting ways, the line of Galileans leading to New-

ton, Einstein, and Mission Control in Houston placing men on the moon and ships bound for the far stars, the line of Cartesians leading to Hume and Kant and a reluctant conviction that the universe of reality pre-jacent to and independent of the human mind is a universe forever unknowable. Modern philosophy, in short, came to play Mr. Hyde to the Dr. Jekyll of modern science, which remained convinced in its practitioners that reality was just what was being revealed and brought more and more under the arts of human practical knowledge, exactly as the medieval Aquinas had expressed it: that the speculative understanding of the being of nature becomes by extension practical when human beings find the means to turn that understanding of nature to use.

Locke, of course, had tried to intervene in the Cartesian development to give credit and credence to the role our senses play in feeding the growth of human understanding, but his intervention was without avail for deflecting the main trajectory of the mainstream modern development in philosophy as a kind of semiotic lapse. For, by accepting Descartes' reduction of objects to representations made by the mind, he foreclosed the only avenue by which the understanding moves back and forth in its grasp of objects between the realms of nature and culture, considering the last, as Vico said, as our own construction, even as the former comes somehow from the hand of God, as the moderns mainly assumed.

To be sure the Latins had only themselves to blame for being consigned in turn to the flames of modernity. A decent interval had to pass before the outrages of the Latin authorities could fade into the oblivion of consciousness of the living generations, and it was probably inevitable that, along with the healing of the wounds of that memory, the speculative achievements of the Latins in illuminating the nature of the workings of properly human understanding and the semiotic structure of the experience upon which it depends and feeds, as we now realize looking back, should also for a time suffer oblivion. But it is time to separate the chaff from the wheat, and to go back over the fields of Latin philosophy and civilization to see what might be retained or rehabilitated in the area of the philosophy of being, still, after all, the most ample of the interpretive horizons ever achieved within philosophy, and arguably the one most proper to the nature of understanding itself as the linguistic dimension of the human modeling system whereby alone a relative freedom from or transcendence

over the perceptual horizon of sensation is achieved within our experience of objects not all of which reduce to our experience of them.

The clearest beginnings of such a recovery as far as concerns semiotics, surely, came through the work of Umberto Eco and his marvelous team of students and colleagues at the University of Bologna, who were able to report that, despite our fondness in philosophy for tracing Greek origins of main concepts, in the case of the sign, the key concept of a general mode of being superior to the division between nature and culture was owing to the Greeks not at all but to one ignorant of Greek, Augustine of Hippo. After Augustine, there will be both natural and cultural signs; but before Augustine, the Greeks had thought of the sign mainly, almost exclusively, in natural terms. The σημεῖον of the Greeks was not at all what we would today call "sign in general" but rather "natural sign in particular". The notion of sign in general was, precisely, *signum*, Augustine's Latin term proposed just as the 4th century closed to express the idea that the universe of human experience is perfused with signs, not only through our contact with the natural being of our physical surroundings in the signs of health and weather, but also through our contact with our conspecifics in discourse and trade, even in our contact with the divine through sacrament and scripture.

There was no turning back. The Latin Age was born in the perspective of the sign as the pervasive instrument of understanding. It would take almost twelve centuries for the consequences of that fact to be worked through to their speculative ground in the *Treatise of Signs* of John Poinsett, contemporary of Galileo and Descartes, to be sure, but a man as decisively of the Latin past as Galileo and Descartes were men of the modern future. For human beings are animals first of all, and animals first of all experience the universe of nature not as things but as objects to be sought and avoided or ignored. Animals make use of signs without knowing that there are signs, let alone without realizing that signs are in the objective world of experience an instrument as universal as is motion in the world of physical being.¹

In their absorption in the world of objects, the sign appeared to the Latins, even to Augustine in making his general proposal, not in its pure and proper being as a triadic relation (indifferent, like all relations, to the surrounding circumstances which make it physically real

¹ The most interesting formulation of this point by far among contemporary writers is to be found in Jacques Maritain 1937–1938: 1; 1938: 299; 1956: 59; 1957: 86. Comprehensive discussion in Deely 1986a.

as well as objectively so, or only objective), but rather in its sensible manifestation as a connection between objects experienced whereby the one, on being perceived, manifests also another besides itself, perhaps even one absent from the immediate perceptual surroundings. That objects in order to be experienced at all presuppose signs already at work in the activity of understanding never occurred to the Latins, though that was a clear consequence (clear, that is, after the manner of all consequences, which is to say, once it is *further realized*) of the realization that the being proper to signs is not at all that of something sensible as such but that of relation as irreducible to whatever aspects of subjectivity the relation happens to depend upon for its existence in these or those concrete circumstances.

The privilege of the Latins was first to propose and then to vindicate the general notion of signs. After that came modernity, a new way of approaching the understanding of objects as such still prior to the further realization that objects presuppose signs, and indeed, developed in a manner contrary to what such a realization would require.² Finally came the dawn of postmodernity, the recovery of *signum* in the work of the first American philosopher worthy to be named in the company of Aristotle and Aquinas, Charles Sanders "Santiago" Peirce. He was among the last of the moderns, to be sure; but, more importantly, he was the first of the postmoderns, because he was the first after Descartes (with the partial exception of Hegel) to show and to thematize the inclusion within the world of objects something also of the physical being of nature in its own right, just as it is in its pre-jacency to and insouciant independence of systems of human belief and speculation.

The Latins had uncovered and identified the being proper to signs as the base of our experience of objects. But action follows upon being. The next step perforce would be to thematize the action of signs precisely in order to understand in detail what the being proper to sign entails. And this is precisely the step Peirce took after first learning most, though not all, of what the Latins had discovered of the sign in its proper being. He even gave to this action a name, *semiosis*, as the subject matter whose study results in a distinctive form of philosophical and even scientific knowledge, *semiotics*, just as biology is a body of knowledge that develops out of the study of living things, and geology out of the study of the earth. The Latins too had demonstrated the

² See the details of the case as presented in Deely 1994a, along with the comments of Santaella-Braga 1994.

necessity of three terms involved in every sign, but their living tradition ended before any had thought to name that third term. This too fell to Peirce, who called it the *interpretant*, and who further saw without quite ever succeeding to explain that the interpretant need not involve finite consciousness.

The bare proposal for semiotics that Locke had contradicted his own *Essay* by making, of course, came near the beginning of modern thought; but it had no influence on the modern development. Nor did it embody any awareness of the Latin past in this matter, save perhaps in the bare echo in the English expression “doctrine of signs”, which Locke used to translate his nouveau Greek term (malformed) σημιωτικὴ of the Latin *doctrina signorum* actually used by Poinset in explaining the content and plan of his *Treatise on Signs*. Had the proposal been influential in its time, we would not now be speaking of *postmodernity*, for the mainstream modern development of philosophy (as distinct from science³) would have been aborted thereby. But the proposal was not influential; and Mr. Hyde had many years to live and to grow into the monstrosity of idealism, the doctrine that whatever the mind knows in whatever the mind knows of it the mind itself creates, a doctrine which the late modern philosopher Jacques Maritain, in exasperation, at last proposed⁴ should be denied the very name of philosophy in favor of something like “ideosophy” instead.⁵

As early as Locke’s proposal for semiotics, the achievement of the Latin Age in first proposing and finally explaining the being proper to sign as a general mode of being had already crossed the social line separating contemporary concerns from the cultural unconscious, that limbo for the achievements of previous generations of human animals which have slipped outside the focus of the consciousness of a yet living generation of human animals. So let me try to show how, in refocusing on the sign, postmodern thought has as part of its destiny to recover the whole of the Latin Age unified in an unexpected way by the theme of the sign, a theme which, we will see, reprises all the standard issues covered in the “standard presentation” of medieval

³ I have published preliminary statements on the distinction between philosophy as *doctrina* and modern science as *scientia* in Deely 1978, 1982a, 1986b; but the full justification of this distinction as a thesis concerning the history of philosophy as a whole over its development before, during, and after the modern period is to be found in Deely 2000a.

⁴ Maritain 1966.

⁵ But, except for the astonishing writings on this point of Peter Redpath, Maritain’s suggestion so far has fallen on deaf ears.

philosophy from Augustine to Ockham heretofore, but reprises them as subordinate themes to that of the sign, which is the one theme which unifies the age as an organic whole, and so goes beyond the "standard coverage" by requiring us to take account of that series of thinkers after Ockham which link the *Treatise on Signs* of Poinot that culminates the semiotic line of Latin development as well to that series of thinkers before Ockham that begins with Augustine.

The language of semiotics

The Latin contribution to our European heritage of semiotics is massive C original, foundational, pervasive, yet at least temporarily, inconscient in the greater part of those intrigued with signs. The situation is hardly static, but it remains true that as we enter the last months of the second millennium of the common era, the Latin contribution to semiotics exists mainly as a current or layer within the cultural unconscious, yet one which little by little has begun to be brought into the light of conscious awareness beginning especially, as I have said, with the work of Umberto Eco for the world at large; but also, within the Hispanic world, by the publications of Mauricio Beuchot. The contemporary development of semiotics, we are beginning to see, owes far more to the Latin Age than it does either to modern or even to ancient times, which is not at all to deny the singular importance of the ancient Greek medical heritage so forcefully brought out first by Sebeok.⁶ Nevertheless, the Latin Age has in our cultural heritage in the matter of the sign a historical weight (here, I can no more than suggest) that perhaps manifests its inertia in the improbable reversal of fortunes of the two terms under which contemporary study of signs has organized itself, namely, "semiology" (first and everywhere in the first six or seven decades of the 20th century), then "semiotics" (here and there in the 60s, and now become dominant over the waning band of those who, more and more wistfully, label themselves "semiologists"⁷). There is after all a weight of language, an inconscient capacity of words subtly to shade the tint of even the most present experience with the perspective and understanding of generations past, as if

⁶ See esp. Sebeok 1975, 1984, 1984c, and 1996.

⁷ See the survey of usage in Sebeok 1971; then further "Rectificando los terminos 'semiótica' y 'semiología'", in Deely 1996: 300–317; and "Ferdinand de Saussure and Semiotics" in Tasca 1995: 75–85.

the ghosts of those generations were whispering memories into the mind's ear as each new generation learns to speak.

Nor are my dates of demarcation, the end of the 4th and the beginning of the 17th century, arbitrary. For if we look at the Latin history in philosophy in the light of sign as a theme, we discover something astonishing: instead of a chaotic age going off in many directions, one only gradually achieving a center of gravity in the so-called "high medieval" period and afterward dissolving into nominalism and the exuberance of the Renaissance recovery of Greek classics, we find a distinctive age of philosophy organically unified from beginning to end above all by its first speculative initiative made in philosophy without precedent or anticipation in the world of ancient Greek philosophy. The sign, it turns out, was not only the original Latin initiative in philosophy, as Eco discovered, but, what seems never to have occurred to Eco's circle, the sign provides the theme that shows a true unity of that age in moving from the simple positing of the fundamental notion to its complex justification as no *flatus vocis* but rather the nexus of human experience as transcending nature in the direction of mind and back again from mind in the direction of nature.

In speaking thus we take up a theme from a German philosopher who dominated the 20th century with his cryptic pronouncement that "Language is the house of Being".⁸ For "language" here did not signify at all what, say, the everyday American or Italian refers to by the vocable "language". On the contrary, Heidegger meant something much more profound, what our American *paterfamilias* Thomas Sebeok — no everyday American, he, but rather, as I have explained elsewhere,⁹ and as many in this room independently and easily understand, a putative Martian and (what comes to the same), like Vilmos Voigt, a Hungarian — explains rather¹⁰ as the product of our *Innenwelt* or "modeling system", that species-specifically human capacity which results in an *Umwelt*, an objective world, an arrangement of objects classified as desirable, contemptible, or beneath notice (+, -, 0) insofar as that typically animal arrangement of experience is further permeated and transformed by the human awareness of an interpretive horizon for these objects as specifically consisting of more than their relation to the one perceiving them, and thus carrying a history which imports into the individual consciousness, for the most part unknow-

⁸ Heidegger 1947.

⁹ See Tasca 1995.

¹⁰ Sebeok 1984b and elsewhere.

ingly but nonetheless in fact, a structure of awareness and experience which links the individual with the understanding of the world worked out and adhered to by forebears long dead whose codifications of understanding are embodied in the words we speak, those linguistic vessels which, all but entirely, preceded our individual births and will continue at play in linguistic communication long after we have died.

So the "being" which language houses is above all a historical reality, the preservation in human community of the affective and cognitive links which have their roots in times long past but which define through their presence in the psychology of living individuals the contours of what we call a natural language community, with all the vagueness and inevitable overlappings that result in that notion as a consequence of the fact that the human modeling system, alone among the animal modeling systems on this planet, is not restricted in its communicative elements and terms to sign-vehicles objectively accessible as such to sense perception.

It is from this *point d'appui* that I want to address, with an eye to our Latin past, the present development and immediate future of semiotics. For if language is, to speak in the accents properly Heidegger's own, a *seinsgeschichtliches Wesen*, an essence freighted with being, then it is surely there, indeed, in the vocable itself "semiotics" (something that Heidegger himself never considered, even as he was typically ignorant of almost every one of the late Latin thinkers who were key to the semiotic denouement of their age in philosophy), that our heritage lies at once concealed and manifestly present in its permeation of and influence over thinkers wherever the semiotic community has taken root in our nascent contemporary "global culture". Even moreso is this the case with the simple vocable "sign". So let us reflect on the Latin dimension of our heritage as it is carried within two simple English words: first "sign", and then "semiotics". What, even unconsciously, do these two simple expressions import into our present experience of the world from the predominantly Latin phase of the European development?

From Latin *signum* to English sign

The ontological weight of Latin history at play in the shaping of our contemporary use of "sign" is conveyed through a derivation directly and immediately Latin: *signum*. There is a conjecture that this Latin

term carries over a Sanskrit sense of “to cling to or adhere”, which is probable, but not probable enough to pursue for present purposes. For, so far as it is a question of the concept and destiny of sign that furnishes the foundations for what we have come to call semiotics, namely, the body of living knowledge developed out of the thematic observation and analysis of the action unique and proper to signs (both as such and in their various kinds), we are dealing with a coinage that as a matter of fact does not go beyond a rather late stage of the Latin language itself, it being a posit, as has been discovered, put into play just three years before the end of the fourth century of the Christian or “common” (if you prefer) era.

Well, by coincidence, this was the very time when the move of the capital of Roman Empire from Rome to the Byzantine region had just been consolidated. This was the time when the peoples who would form Europe were adopting the original Latin tongue of the old empire, while the rulers themselves were abandoning Latin in favor of the Greek language. This was the time, in short, when we witness in hindsight the astonishing split of a single political entity, the Roman Empire, into two halves soon to share virtually no common linguistic tie.

It is common wisdom that the term “semiotics” comes from the root of the Greek word σημεῖον, standardly translated as “sign”. As is all too often true of common wisdom, so in this case it forms a dangerous alliance with ignorance by concealing more than it reveals without any overt hint of what is hidden. The alliance is dangerous in this case because what the common wisdom conceals is of far greater import for any deep understanding of a European heritage in the matter of the study of signs than what it would lead the first-time comer to that study to believe. For the truth is, the astonishing truth, with which semiotic reflection needs most to begin, is that there is no general concept of sign to be found in Greek philosophy, and the term standardly mistranslated to conceal that fact is σημεῖον, a word which means, in Greek, not at all “sign” in any general sense but only very specific forms of sign, particularly ones associated with divination, both in the invidious sense of prophetic and religious divination and in the more positive scientific sense of prognostications in matters of medicine and meteorology.¹¹ Σημεῖα, in other words, are from outside the human realm, are from nature, either in the manifestations of the gods or in the manifestations of the physical surroundings. Within the human realm are found not signs but symbols (σύμβολα) and, what is

¹¹ Manetti 1993.

after all but a subclass of symbols, names (*ονοματα*), the elements in general of linguistic communication.

All this will change after Augustine (354–430AD). Too busy in his youth for one set of reasons to learn the Greek language in use all around him, too busy in later years for another set of reasons to learn the Greek language visibly losing ground in the Western regions of Roman empire but yet dominating the realm of theological and religious discussion, and, in any event, disinclined by temperament to study Greek in any season,¹² Augustine it was who, in an ignorant bliss, began to speak of sign in general, sign in the sense of a general notion to which cultural as well as natural phenomena alike relate as instances or “species”. Not knowing Greek, he was ignorant of the originality of his notion. That he was proposing a speculative novelty never crossed his mind, and, his principal readers being similarly ignorant, the fact is not known to have occurred to any one in his large and growing audience. What was obvious to the Latins was the intuitive clarity of the notion and its organizing power. Look around you. What do you see? Nothing or almost nothing at all that does not further suggest something besides itself, something that almost normally is not itself part of the physical surroundings immediately given when you “look around”. There is a tombstone, my childhood friend’s grave; there is a tree, the one planted for the occasion of the burial; there is a pot of flowers now dead, placed here a month ago to honor the memory of this friend. And so on.

Nothing at all is all that it appears. Everything is surrounded by the mists of significations which carry the mind in many directions, all according to knowledge, interest, and level of awareness brought to bear at any given moment when we happen to “take a look around”. Of course all these perceptions involve signs, the gravestone no less than the cloud. And the fact that the one comes from human artifice and the other from nature makes no difference to the fact that both alike signify, that both alike, in Augustine’s words, “*praeter species quas ingerit sensibus aliquid aliud facit in cognitionem venire*” (“over and above the sense impressions, make something besides themselves come into awareness”).

So little were Augustine and the Latins after him aware of the novelty of their general notion of sign, indeed, that the novelty would appear never to have come to light before researchers of our own time turned the tools and light of scholarship to uncovering the historical

¹² Augustine 397: i, 14.

origins of semiotics. To my knowledge at least, as I have several times indicated, it was the team of researchers who have worked the fields of ancient thought from a semiotic point of view under the guidance and tutelage of the celebrated Italian scholar and Bologna professor, our friend Umberto Eco, who first brought to light¹³ and subsequently established more fully¹⁴ Augustine's incognizant originality in this particular.¹⁵ Whatever be or not be the Sanskrit overtones, the English word "sign" comes directly and immediately from the root of the Latin term *signum*, and this term with the familiar general sense it has for semiotics, of providing a subject matter that merits investigation into natural and cultural phenomena alike, was a novelty in the maturity of Augustine.

So there is the earliest and second most definitive¹⁶ landmark in the Latin heritage of postmodern semiotics: the very notion of sign in the general sense was introduced at the dawn of the 5th century AD to draw attention to and mark the fact that *all* our objects of sense perception are experienced within a web of relations that much later thinkers — Thomas Sebeok in particular, developing a suggestion in the work of Jakob von Uexküll — aptly designate a *semiotic web*. The very word "sign" is itself a sign self-reflexively of the not only of the Latin but indeed of the European heritage in this area, the very con-

¹³ See esp. Eco, Lambertini, Marmo, and Tabarroni 1986; and the the editorial note on the provenance of this text, *ibid.* p. xix.

¹⁴ Manetti 1993.

¹⁵ The discovery entered our semiotic literature of today as an anomaly, a curious fact that, like Albert the Great's fossils in the 1260s, puzzled the mind without suggesting any grand hypotheses. Ironically, when an abduction was finally made and formally presented full-scale in the work of Manetti just cited, the guess missed and, for want of a familiarity with the key texts of later Latin times, as we will have occasion to mention, proffered the wild hypothesis that it was the Latins themselves, and not the late modern structuralists and deconstructionists heir to Saussure, who began the development that culminated in the semiological thesis that there are only conventional signs. See the essays referred to in note 3, p. 2, above; but especially Chapter 16 in the *Four Ages of Understanding*. Nonetheless, the asymmetry of ancient Greek and modern national language philosophy on this point is worthy of note: as the ancients recognized only *natural* signs, so the moderns came in the end to recognize only *conventional* signs. The Latins, by contrast, like Peircean postmoderns, are distinguished by the theoretical means of recognizing both.

¹⁶ The most definitive landmark, of course, would by rights be the theoretical demonstration that the general notion of sign was a *warranted* notion. But "rights" in these matters are, from the standpoint of popular culture, matters of some amusement, when they are recognized at all; were it otherwise, Peirce would have been from the start, and not merely as a matter of future tenancy, far better known among semioticians than Augustine.

crete fact that “Europe” was the gradual creation of the heirs and interlopers to the original Western lands of the Roman Empire who took over also its original language. This *mélanges* of peoples inherited and transformed the original language of that Empire through an indigenous philosophical development that began roughly in the 4th century and continued thereafter until the 17th century, the time of the decisive break of modernity from the Latin Age both in the establishment of science in the modern sense (as an intellectual enterprise distinct no less from philosophy than from theology and religious thought) and in the establishment of the developing national languages in place of Latin as the principal vehicle henceforward for the sustenance of European intellectual culture.

For since semiotics is the body of knowledge that develops through the study of the action of signs, as biology is the systematic knowledge that is developed from the study of behavior of living things, etc., semiotics may be said to have actually arisen only at that moment when the general notion of sign as a unified object of possible investigation was introduced. The mere fact that, prior to such a conception, there were signs at work throughout the living world (and, both beyond and before that, perhaps, in the wide world of physical nature itself, as Peirce first proposed¹⁷ and as has more recently been analyzed under the rubric of “physiosemosis”¹⁸), does not mean that there was semiotics in the universe prior to the Latin Age — except, of course, as a possibility in the sense of having a place “marked out in advance”, as Saussure so well put it.¹⁹ Semiosis, Peirce’s name for the action of signs taken from — or, rather, forged on the basis of — remarks in the Epicurean papyrus written by Philodemus in the last century preceding the common era,²⁰ precedes semiotics, just as living things precede biology and rocks precede geology. But biology as a science presupposes that the world of living things be conceived as a thematically unified subject of possible systematic inquiry. Similarly, a doctrine of signs presupposes that the action of signs be conceived as a thematically unified subject matter of possible investigations. And

¹⁷ His “grand vision”, I would call it (Deely 1989).

¹⁸ A term coined in Deely 1990 and developed in a series of essays after that, most recently 1996 and 1997.

¹⁹ Saussure 1916: 16.

²⁰ Philodemus i. 54–40BC. See Fisch 1978: 40–41 for discussion of Peirce’s derivation and coinage.

the first to give us a notion of sign which accomplishes this presupposed feat was Augustine.

Of course there were investigations of various kinds based on the action of signs long before Augustine. Indeed, we now realize that every investigation is based on the action of signs, every investigation has a semiotic component or dimension that can be brought out and highlighted theoretically. But that is not the point. Just as any predator stalking its prey relies on knowledge acquired from a study of signs, yet not every predator is a semiotician; so every semiotician owes his or her profession to the fact that someone, in fact, Augustine of Hippo, first introduced into intellectual culture the notion of sign in general, under which notion the particular investigations we call semiotics are brought together objectively in the conception of a unified subject matter of possible investigation. There are not only signs as tokens; there is also sign as type, the type defining and distinguishing those investigations properly called "semiotic" in contrast to "chemical", "astronomical", "biological", and so forth, even though we can also say, from the standpoint of semiotic consciousness, that every other subject matter physical or cultural necessarily involves and develops by semiotic means.

Sign itself, the general notion or type (the "general mode of being", Peirce liked to say) of which all particular signs are instances or tokens, then, is the first and foundational element of the semiotic heritage. For it is that presupposed notion which first makes the development of a doctrine of signs possible in the first place. It marks, as we may say, the initial awakening of semiotic consciousness; and it occurs more or less at the very beginning of the Latin Age in the history both of the formations that lead to modern Europe and of that part of intellectual culture traditionally called philosophy. Semiotic consciousness owes its initial awakening, if not its name, to the introduction of the general notion of sign in the work of Augustine.²¹

But what after Augustine? Does the Latin Age contribute nothing more to semiotic consciousness than its foundational and organizing notion of sign? As a matter of fact, Augustine's original and constitutive contribution in this regard risked in advance the disaster of *nominalism*, that infection of speculative thought which blinds the mind to the dependence in understanding of everything the senses yield upon general modes of being insensible as such, yet as independent or more independent of human whim as anything on the order of rocks or stars.

²¹ See Augustine i. 397–426 in particular.

For it is not enough to *propose* the general notion of sign as a mode of being. The proposal needs to be theoretically justified as well. *How is it possible* for there to be such a thing as a general mode of being that transcends the division of objective being into what exists prior to and independently of cognition and what exists posterior to and dependently upon cognition or mind?

This question never occurs to Augustine. For him, as for the next seven centuries of Latin thinkers, the general idea of sign seems so intuitively valid that we find it employed throughout the theological and philosophical writings without the appearance of a second thought. Of course, the seven centuries in question are not exactly luminous with speculative developments within philosophy. In fact, they are precisely what first the renaissance humanists and many modern historians after them refer to derisively as “the dark ages”, the centuries marked more by the collapse than by the rise of centers of serious learning. This was a function of the condition of civilization itself in the early indigenous Latin centuries. But by the time in the 11th and 12th centuries when we see the universities, that greatest of all the contributions to present civilization surviving from the polities of the Latin Age, begin to form at Paris and Bologna and then all across what will become Europe, spreading even to China by 1900, the “constantly alive, burning and inevitable problem”²² Augustine has bequeathed to Latin posterity makes its way to the fore. *Signum*: general mode of being or empty nominalism, *flatus vocis*?

The burning question bursts into flame at least as early as the writings of Aquinas (1225–1274) and Roger Bacon (c. 1214–1292). The first turn the controversy takes toward a generally theoretical development of Augustine’s posit hanging in thin air (for what is to prevent the vocable *signum* from being a sound signifying nothing, like “phlogiston” or “aether” or “immutable crystalline spheres” any of the countless other words posited across the centuries which turn out to be names for confusions in thought that, when clarified, disappear) fastens not on the general notion itself but on the question of whether only a sensible object can function in the capacity of a sign, whether being a sensible material structure was rightly included in the general definition. For Augustine’s posit had two aspects: the general notion of sign as verified in whatever makes present for awareness something besides itself, and a proposed definition that ties this functioning to impressions made upon sense.

²² Beuchot 1986: 26.

It was over the formulation of Augustine's definition of sign that the problem first broke into open flames. Beginning with Aquinas²³ and Bacon,²⁴ then developing after them in the writings of Duns Scotus (c. 1266–1308), William of Ockham (c. 1285–1349), Pierre d'Ailly (1350–1420), Dominic Soto (1495–1569), Pedro da Fonseca (1528–1599), the Conimbricenses (1606, 1607), Francisco Araújo (1580–1664), and culminating in the work of John Poinsoot (1589–1644), this first aspect of the problem received an all but unanimous resolution among the Latins: not only sensible objects as sensible, but also those interpretive structures of the mind (called today "ideas and images" but in those times "species expressae") on the basis of which sensible objects are presented in experience as this or that kind of thing, fulfill the function essential to being a sign. A common terminology even evolved, after d'Ailly (or perhaps before, for this terminological point has not quite been pinned down as yet historically), to mark the point linguistically. Sensible objects as such which make present in cognition something besides themselves the Latins agreed to call "instrumental signs", while those interpretive structures of thought as such, those *psychological states of the knower*, as we would say, which serve to found the relations which make sensible objects present at their terminus as this or that kind of individual they called by contrast "formal signs".²⁵

But this agreement on terminology proved to be but a verbal agreement, which is perhaps why it has proved to have little enduring power beyond the time of those who forged it. In fact, the comity

²³ Especially with Aquinas, for even though he never focused thematically on sign as a question of systematic pursuit, his work is so vast, and problems central to the eventual formation of such a systematically pursued theme recur tangentially to issues he does systematically pursue, that he leaves a trail of tantalizing suggestions to be pursued over the entire *corpus* of his writings: c. 1254–1256: the *Commentary on the Sentences of Peter Lombard*, Book IV, dist. 1, q. 1, quaestiunc. 2; c. 1256–1259: the *Disputed Questions on Truth*, q. 4. art. 1 ad 7, q. 9. art. 4 ad 4 and ad 5; c. 1269–1272: the *Questions at Random*, q. 4 art. 17; c. 1266–1273/4: the *Summa theologiae* III, q. 60, art. 4 ad 1. Indeed just this trail is what Poinsoot will follow in bringing to publication 358 years after Aquinas' death the first systematic demonstration of a being common to all signs as such, and hence the first *demonstration* (in contrast to *posit*) of the existence of a unified subject matter for semiotic inquiry. It will be exactly 353 more years before this effort of Poinsoot will surface outside of the Latin language — such is the slow rhythm of semiotic development.

²⁴ See esp. Bacon c. 1267.

²⁵ The fullest historical discussion of this first phase of the later Latin development is presented in Meier-Oeser 1997: "Die Unterscheidung von *signum formale* — und *signum instrumentale*", pp. 238–251.

among the differing Latin schools on this verbal point served to mask a much deeper disagreement that became apparent to the cognoscenti as soon as the question of Augustine's defining formula was realized to involve the more profound problem of the very being proper to signs, of the type manifested in the tokens — of the being, that is to say, enabling signs, any and every sign as such, to function as a sign in the first place.

Augustine's original proposal of a general definition may have been too narrow, as all came to agree, but at least it had the merit of applying to particular things. Now Ockham and his followers increasingly distinguished themselves by insisting that only particular things are real. Ideas of the mind may not be sensible characteristics of individuals, but they are subjective characteristics of individuals no less than is the color of one's skin or the shape of one's nose. *My* idea is as much a part of my subjectivity as is *my* shape or size or color. Hence the nominalists could distinguish formal and instrumental signs as respectively inaccessible and accessible to direct sense perception without admitting that there is any *type* or general mode of being verified equally in the differing tokens or instances of sign.²⁶ For be it a

²⁶ This second and decisive aspect of the late Latin development of semiotic consciousness has so far not been discussed in the literature, and Meier-Oeser, in his work splendid as far as it goes, appallingly misapprehends this aspect of the problem. I can refer the reader only to Chapters 8–10 of my forthcoming book, *Four Ages of Understanding* (see the "promissory note" in Deely 1996a), which traces the complete history of philosophy from Thales to Eco in terms of the bearing that history has on the current and prospective development of semiotics as the positive essence of what can only be called (in philosophy at least, where "modernity" is defined by the epistemological paradigm according to which the human mind is capable of knowing only the products of its own operations) a *postmodern* development. The opening of the new historical epoch, in fact, may be dated specifically to May 14, 1867, when Peirce presented his "New List of Categories". For the list in question contrasts both with Aristotle's original list of c.360BC, by including specifically the objective products of mind as well as the knowable elements of physical nature, and also with Kant's list of 1781, by including specifically objective, i.e., directly and immediately known, elements of physical nature as well as phenomena owing their whole being to the mind's own operations.

For the creation, in Peirce's "New List", of an "intersection of nature and culture" (Sebeok 1975a; cf. also Sebeok 1979), set the problematic of the sign squarely beyond the modern quarrels between idealism and realism, in conformity exactly with the terms originally set by John Poinset for beginning a systematic development of the doctrine of signs (1632: 117/24ff.): "the sign in general ... includes equally the natural and the social sign", that is to say, "even the signs which are mental artifacts". And if there is anything which philosophy cannot account for and remain within the constraints of the Descartes-Locke equation of ideas with the objects of direct experience,

sound or mark, an idea or a feeling, the former as “instrumental” no less than the latter as “formal” remains a *particular*, not a general, mode of being. The mind in knowing may make comparisons among objects of which it is aware, and from these comparisons relations do indeed result. But the relations themselves, the relations as such, do not precede the knowing: they are constituted by it. Prior to the knowing, prior to the comparison and independent of it, there remain only the particulars, the subjectivities: that is all.

The Scotists and the Thomists accepted the terminology for distinguishing between signs whose foundation was and signs whose foundation was not directly sense-perceptible (instrumental vs. formal signs, respectively), but they also insisted, against the nominalists, on a more fundamental point: when a particular object or an idea is said to be a “sign”, what makes the appellation true is not the particularity of the feature in question but the fact that it serves to ground a relation to something other than itself. This relation, not the individual characteristic upon which the relation is based, they insisted, is what constitutes the being proper to the sign as such. Thus the Latin authors eschewing nominalism insisted that not only was Augustine wrong to propose a definition tying signs to sense-perceptible objects as such, but that the *reason why* he was wrong was not merely that ideas as well as words and rocks serve as vehicles of signification. The reason is much more profound, namely, that the relations actually and properly constituting signs are always as such and in every case without exception knowable as such only to understanding in its distinction from the perception of sense — exactly what we assert today when we recognize that linguistic communication arises from a species-specifically distinct modeling system, and that it is this modeling system as such,²⁷ not the linguistic communication exapted from its distinctive function, that constitutes “language” in the species-specifically human root sense — a capacity more obscurely designated (from a semiotic point of view) “intellect” among the Latins and “understanding” among the later moderns.

Here, unnoticed by any currently established historian of philosophy, the theoretical divide between the nominalists and their Latin opponents widens to a chasm. For the nominalists relations exist only as mind-dependent elements of awareness through and through, as

it is the possibility of a knowledge of structures of the physical environment according to a being proper to them.

²⁷ See esp. Sebeok 1987.

comparisons made in thought by the mind itself. They exist wholly within and function as no more than a distinguishing part of subjectivity itself actively cognizing — subjectivity: that total complex of characteristics and functions whereby one individual in nature exists unto itself as distinct from the rest of the universe. For those opposing nominalists in the matter of resolving the “burning and inevitable problem” bequeathed from Augustine, relations are as much a part of nature as are individuals, and in fact are a part of nature apart from which individuals could not so much as exist as distinct individuals. For while indeed in the Latin notion of “substance” there is embodied the affirmation of natural individuals, beings existing “in themselves and not in another as in a subject of existence”, the nominalist interpretation of that notion (the only interpretation, it would appear, familiar to the classical authors from whose works sprang the distinctively modern mainstream of philosophy) is completely at loggerheads with the notion as we find it in Aquinas and Scotus or their followers among the Latins, or as we find the notion of substance before them in the Greek texts of Aristotle.

For the opponents of nominalism among the Latins, substance itself is a relative notion; for the individual, “absolute” insofar as its being is one, is yet only relatively distinct from the surrounding universe. The individual maintains its actual existence as relatively distinct only through and on the basis of an unremitting series of *interactions* which provenate and sustain a network of actual relations, relations mind-independent and physical and essential to the continuance of subjectivity even though not themselves subjective, which link the individual to what it itself is not but upon which it depends even in being what it is. So we find distinguished subjectivity and intersubjectivity: substance, as a relative notion of what exists in itself dependently upon other things besides itself (*subjectivity*), distinguished from *intersubjectivity* or rather *suprasubjectivity*, pure relations as such which actually link the individual to whatever it is that the individual depends upon in its existence in whatever way without being that other thing. Intersubjectivity in this pure sense thus *characterizes* the individual but does *not reduce* to the subjectivity of the individual. Individual characteristics are thus both subjective and intersubjective, and the actual existence of the individual as relatively distinct from and within its physical surroundings depends upon *both* types of characteristics.

The nominalists denied that these intersubjective characteristics had any reality outside of thought, any reality over and above subjectivity itself. For over and above subjectivity, the being of *particulars*, some of which happen to include cognition as part of their particularity, there is nothing at all “in the nature of things”. All relations, Ockham asserted, and all the nominalists after him agreed (including Hobbes, Locke, Berkeley, and Hume; Descartes, Spinoza, Leibniz and Kant²⁸), are constituted only in and by thought itself whenever and only insofar as the mind makes comparisons between objects and aspects of objects.

Comparisons the mind makes do indeed give rise to relations within thought, countered the later followers of Scotus and Aquinas. But what makes these relations unique is not the fact that thought forms them so much as the fact that they are suprasubjective without needing to be in fact intersubjective. Indeed, thought is able to form comparative relations only because the understanding has already recognized *in actu exercito* intersubjectivity as a feature of the reality of the physical world, the order of things in the experience of the physical aspects of our surroundings. On the basis of our experience of such features the mind can go on to make comparisons of its own. These further comparisons, like relations in nature, will be “between” objects as linking one to the other, but with this difference: relations between individuals in the physical environment cannot exist *except* as intersubjective, whereas relations fashioned by thought, always interobjective, yet may or may not be intersubjective in fact, inasmuch as one or the other term of such a relation either may not exist at all, or may not exist in the manner that thought presents it to exist. I may be mistaken about who my father is, even though there is no question that in fact I have a father. That is the whole and only difference between mind-dependent and mind-independent relations insofar as they are relations, but a difference that reveals a distinctive feature of pure relations as such that will prove crucial for understanding how signs are

²⁸ Such a spectrum of authors agreeing on so basic a point is worth documenting, and the first one to do so in a brief and systematic compass, I believe, was Weinberg 1965 — although Peirce himself, as early as 1898 (CP 4.1), to cite a specific mention of a point that runs throughout his writings, had full taken note that not only is every modern philosopher from Descartes to Hegel a nominalist, but further that “as soon as you have once mounted the vantage-ground of the logic of relatives ... you find that you command the whole citadel of nominalism, which must thereupon fall almost without another blow.”

possible:²⁹ while every pure relation exists as such over and above whatever subjectivity the relation depends upon in order to actually exist here and now, only some relations are in fact *intersubjective*. Therefore the feature essential to and constitutive of the purely relative as such is not intersubjectivity in fact but *suprasubjectivity*.

If that is so, and every sign consists in a relation as such, then every sign as such serves to link an individual to something that is other than itself, *whether or not this other signified actually exists in any physical sense as a subjectivity in its own right*. The implications of this point are not only enormous, they are decisive for semiotics. The point enables us to see, in the first place, how signs can be used indifferently to lie, to blunder, or to express some truth: the situation depends upon factors wholly external to the sign relation as such, just as my being or not being an uncle is quite independent of anything I do. But perhaps the most interesting theoretical implication of this last point developed among the Latins, tentatively with the Conimbricenses and Araújo, definitively with Poinsoot and, after him and independently, with Peirce, is the implication that the relations in which signs consist according to their proper being as signs differ from physical relations in nature in having of necessity (or “in principle”) three terms united rather than only two. In other words, it suffices for intersubjective instances of relation to be dyadic, whereas the suprasubjective instantiations of relations *as signs* (which realize the indifference in the nature of relation to provenance from physical being as such) must always be triadic. A car can hit a tree only if there is a tree there to be hit; but a sign can warn a bridge is out whether or not the bridge is out, or, for that matter, whether or not there is even a bridge there at all where the sign “leads us to believe” there is a defective one!

Semiotic consciousness, thus, first arose in the time of Augustine, but its principal development as a theoretical theme did not occur until much later, beginning with Aquinas and Roger Bacon in the 13th century and continuing thereafter right down to the time of Galileo and Descartes. This main period of theoretical development occurred in two phases, both of which have been identified only in the most recent times and both of which have only begun to be explored in depth.

The first stage occurs between Aquinas and Ockham, or perhaps rather d’Ailly, when it comes clearly to be recognized that the being proper to signs need not be directly perceptible to sense, a recognition

²⁹ Perhaps it is not to much to say that grasping the semiotic bearing of this point is what constitutes the uniqueness of Poinsoot’s *Tractatus* of 1632.

that culminates in the linguistic marker of the “formal/instrumental sign” distinction. The second stage occurs between Soto and Poinot, when it comes clearly to be recognized that the being proper to signs not only need not but *cannot* be directly perceived by sense, for the reason that this being is constituted not by any subjective characteristic as such upon which a relation happens to depend existentially (such as the shape of an object perceived or the contour of a sound heard) but by the very relation itself which, as suprasubjective — as over and above its sense-perceptible occasion of existing (its “foundation” in the Latin sense) — is never sense-perceptible and need not even be intersubjective. It follows from this that sign relations, that is to say, the relations in which the being proper to signs as such consists (or, simply, in which *signs* most formally and properly speaking consist), must also be triadic and never merely dyadic; and this remains true even when the sign happens to relate actually existing physical subjectivities, for actuality in that sense depends upon factors wholly extrinsic to the sign-relation as such.

It further follows that signs are never mere individual things but exist only insofar as individual beings are involved with things other than themselves, and this with “others” both actually existing and only possibly existing or once having existed (as in the case of dead parents) or only thought mistakenly to exist or have existed. The sign, it turns out, is not merely an object linking another object in thought but that upon which every object depends in order to be in thought at all, whether truly or falsely. And all of this depends on the doctrine of relation which the Latins inherited from Aristotle’s discussion of categories of physical being. But the Latins expanded upon Aristotle’s terse text enormously,³⁰ especially under the pressure of seeking to come to terms with “the burning and inevitable problem” (or rather nest of problems) which Augustine, in his ignorance of Greek, had so casually handed them with his naive, innocent proposal of sign as a genus to which culture no less than nature contributes species.

³⁰ This can be seen most readily in their subsumption of Aristotle’s categorial relation, the *relatio praedicamentalis seu realis*, together with the thought-constituted relation, *relatio rationis*, under the more general rubric of *relatio secundum esse*, together with their setting of this general mode of being in contrast with the order of subjectivity *tout court* subsumed under the rubric of *relatio transcendentalis seu secundum dici*, which latter expression conveyed the requirement both for discourse and for physical existence that substances (subjectivities or “absolute” beings) be always in interactions and pure relations with their surroundings either to be or to be understood. See esp. the “Second Preamble” of Poinot’s *Tractatus*.

In this way we find that, as it belongs to the cultural heritage of the species *anthropos*, semiotic consciousness is an originally and indigenously Latin development, first made possible thematically at the outset of the Latin Age by Augustine's naive posit, but first reduced systematically to its theoretical ground in the being proper to relation by John Poinso't's *Treatise on Signs*, a work brought to print as the Latin Age is nearing its end, and thereafter lost for more than three centuries in the language that almost became its tomb.

How recent is this discovery of the crucial role of the Latin past and how far we have to go to achieve something like a general appreciation of that crucial role may be garnered obliquely from the fact that even as the 20th century ends distinguished figures in the nascent field of semiotics who name their ancestry appear routinely ignorant of more than half of the Latin names brought up in this discussion, including most glaringly that of John Poinso't, who stands easily without peer in uncovering the foundations in being itself of the semiotic consciousness which Augustine may have introduced thematically but which proves on sufficient further investigation to be the consciousness most distinctive of the human animal. It is not as "rational" that the human being finds its distinctive flourishing nearly so much as it is as signifying. We may even go so far as to say that semiotics as an essentially postmodern development carries with it the implication of a new definition of the human being. Even as Descartes introduced modernity by replacing the ancient definition of human being as *animal rationale* with the modern formula, *res cogitans*, so the advent of semiotics at once transcends modernity in the direction of the past and surpasses it in the direction of a future in which the "thinking thing" becomes rather once again an animal, the *animal semeioticum*. I turn to my second terminological point, my second "essence freighted with being".

Where is the Latin in the English word "semiotics"?

Here I will not repeat even in substance the several times³¹, inspired by the seminal essay of Romeo,³² that I have explored in detail Locke's introduction of the vocable $\sigma\eta\mu\iota\omega\tau\iota\kappa\eta$, an only apparently Greek word, misspelled at that, as it turns out, into the concluding

³¹ Deely 1977, 1978, 1982, 1985, 1986, 1990a, 1993, 1994a: 109–143, 1994b.

³² Romeo 1977.

English paragraphs (so brief is his final chapter³³) of his *Essay concerning Human Understanding* of 1690, which propounds in its body an epistemological theory that is anything but hospitable to or compatible with this alternative development he concludes by suggesting³⁴ — namely, the “way of signs”, as I think it should be called.

Let us cut to the chase, and reach our main conclusions.

We have seen that if we take the English word “sign” and ask where it comes from, the answer is that it comes from Augustine of Hippo, the first thinker of record to forge a general notion of sign as a genus (we might even say “genius”) to which natural and cultural phenomena alike are species.

But “semiotics” as an English word is more problematic. Surely its derivation is Greek, as at least learned common sense can divine from its very alphabetic formation. But here common sense, as is usual with even with learned common wisdom, relies on a secret covenant with ignorance. What investigation of the matter shows is that the linguistic formation in question comes about from a kind of bastard Greek coinage actually made by the Englishman John Locke when he proposes *Σημωτικῆ* as a one-word equivalent of the English expression, “doctrine of signs” — itself an expression not merely redolent of but exactly translating, almost to a point of proving an exception to Hill’s dictum on the non-existence of perfect synonyms, the older and well-established Latin formula central to the work of Poinsett and others: *doctrina signorum*. Locke’s term may have come indirectly, as Romeo persuasively urges, from a Greek medical dictionary. Be that as it may, it remains that the term as it appears in Locke is malformed. By the applicable requirements of Greek grammar, it should have had an epsilon separating the mu from the iota, which it did not. Nor can this malformation be dismissed as a printer’s error; for, in every subsequent edition of the *Essay* prepared by Locke prior to his being overtaken by the boundary of time and made a definitively *past* author, the original malformation is meticulously maintained.³⁵

Now it is curious that “*semiotics*” is not a straight transliteration of *Locke’s Greek malformation*. What is a straight transliteration of

³³ The whole of Locke’s chapter from the original edition of his *Essay* is photographically reproduced in Deely 1994a: 112.

³⁴ I would refer the reader to the Allen — Deely exchange in *The American Journal of Semiotics* 11(3/4).

³⁵ I have actually verified this through combined holdings of the Library of Congress and the libraries of the Smithsonian Institution, both in Washington, DC.

the Greek malformation Locke introduced, however, is the Latin term “*semiotica*”, which no Latin author ever used. So the term, a Greek malformation in Locke’s *Essay*, is in effect a neologism in Latin transliteration. But the term means in English “the doctrine of signs”, according to the only definition Locke provided in his original introduction of and comment upon the would-be Greek term.

The reason that this detour through the nonexistent Latin transliteration of Locke’s Greek malformation is interesting is because “*semiotica*” as Latin neologism would be a neuter plural name that could only be translated into English as “semiotics”. Professional linguists have been careful to point out that there is in English a class of “-ics” words which do not conform to the usual rule that an English noun is made plural by adding an “s” to its ending.³⁶ By this reckoning, “semiotics” is not the plural form of “semiotic”. Nonetheless, “semiotics” is the direct English transliteration of the Latin “*semiotica*”, which in turn is the direct transliteration of the Greek malformation Locke introduced into the closing chapter of his *Essay*, and *would be* a true English plural if taken from the Latin.

So a Latin, rather than a Greek, background proves etymologically decisive for sign and semiotics alike as contemporary notions, despite Locke’s conscious choice of the Greek root (*sem-*) for the notion of “natural sign” (*semeion*) in his one-word summation or name (*semi-otike*) for the doctrine of signs.

Of course, the Greek philosophical contribution to what would eventually take form in contemporary culture as an explicit attempt to develop the doctrine of signs can hardly be underestimated, particularly in Aristotle’s doctrine of categories — for example, with his sharp development of the contrast between subjective being in the doctrine of substance (what Poinsett clarified long-standing Latin usage by terming *transcendental relation*,³⁷ which is not really relation at all but subjective being itself viewed in terms of its existential and ontological dependencies upon the surroundings), and suprasubjective being in the doctrine of relation (which Poinsett followed Aquinas in terming *ontological relation*³⁸). But it remains that it is first in the late

³⁶ “At least a part of the confusion which learners experience in handling the *-ics* words ... is caused by the fact that no dictionary makes clear that the final *-s* in these words, no matter what its origin, is not identical with the familiar plural morpheme of nouns which happens to be homonymous with it” (Hill 1948).

³⁷ Actually *relatio transcendentalis seu relatio secundum dici*, since in fact we know of no case where Poinsett spoke or wrote a word of English.

³⁸ Again actually: *relatio secundum esse*.

4th century Latin of Augustine that the general notion of sign appears, and that it is first in the early 17th century Latin of Poincot that this general notion is decisively fully vindicated as more than a nominalism. Contemporaneously, the Latin Age itself recedes into the shadows of times past as modern philosophers with their nominalistic doctrine of ideas as the objects of direct experience take control of European intellectual development in philosophy.

Comments in closing

By the time Charles Peirce passed from the status of future, that is, not yet living, to the status of present contributor to philosophical discussion, the richness of the Latin notion of *signum*, its origin, development, and vindication over the 1200 or so years of the Latin Age, had passed into oblivion, forgotten to all present contributors to the discussion of philosophy. Peirce in this matter, fortunately for us all, proved not to be a typical modern. He did not condemn the past of philosophy, in particular its Latin past. He undertook instead to explore it.³⁹ And, though his explorations did not reach as far as the work of Poincot, they did bring him as far as Poincot's principal teachers and immediate predecessors in the matter of the doctrine of signs, Thomas Aquinas, Duns Scotus, and the Conimbricenses.

As a result, Peirce was able to recover the Latin notion of *signum* very nearly at the point where the Latins had left it, that is to say, at the point where it had been realized and definitively explained that *signs* strictly speaking are not their sensible or psychological vehicles, but that this vehicle, loosely called a "sign" (especially in the case where it is a sensible object), is but the subjective foundation or ground (the vehicle, we might say) for an irreducibly triadic relation which, in its proper being, is not subjective but suprasubjective in linking its subject term to a terminus or object signified as represented to some observer or interpretant, prospective or actual in *its* subjective being; and which, as a relation, is indifferent to passing back and forth between psychological and material vehicles of conveyance. Thus, while both the sign vehicle and the observer when actual are subjective beings, the sign itself is always and irreducibly suprasubjective.

³⁹ The matter has been documented in Beuchot and Deely 1995. And I suggest that one of the most telling results of his Latin forays were his singular "ethics of terminology": see Peirce 1903, Deely 1998a.

And the “object signified” or significate of the sign is itself always and irreducibly sustained as the direct terminus of a triadic relation regardless of whether it has any subjective being at all as an immediate part of its objective being, its “objectivity”, or status as signified.

If the most important development for the immediate future of philosophy (and perhaps for intellectual culture as a whole) is to be, as I believe, the realization of the centrality of the doctrine of signs to the understanding of being and experience for human animals, then Peirce’s recovery of the notion of *signum* from the Latins may be said to have marked the beginning of new age in philosophy. By overcoming the forgottenness of *signum*, the veritable *Zeichensvergessenheit* of modernity (as including Heidegger in this particular), Peirce also destroyed the common foundation upon which the mainstream modern philosophers (from Descartes and Locke to Kant in the classical phase, continuing with analytic philosophers and phenomenologists in our own day) had constantly built. There are some today who embrace modern philosophy’s culminating doctrine that only the mind’s own constructions are properly said to be known, ones who have yet tried to coin and appropriate the phrase “postmodern” to advertise their stance. But the vain appropriation cannot conceal the stipulation which guarantees that these would-be postmoderns are nothing more than surviving remnants of a dying age, the last of the moderns, in fact, the “ultramoderns”. The future, in philosophy and in intellectual culture more broadly conceived, belongs rather to semiotics, the clearest positive marker we have of the frontier which makes modernity be to the future of philosophy what Latinity was to philosophy’s future in the time of Galileo and Descartes — though this time we will hardly be able to repeat Descartes’ mistake of counting history as nothing, as the joint work of Williams and Pencak⁴⁰ has perhaps best shown.

References

- Aquinas, Thomas i. 1252–1273. *S. Thomae Aquinatis Opera Omnia ut sunt in indice thomistico*, ed. Roberto Busa. Stuttgart-Bad Cannstatt: Frommann-Holzboog, 1980, in septem volumina: 1. In quattuor libros Sententiarum; 2. Summa contra Gentiles, Autographi Deleta, Summa Theologiae; 3. Quaestiones Disputatae, Quaestiones Quodlibetales, Opuscula; 4. Com-

⁴⁰ See Williams and Pencak 1991; and Williams 1984, 1985, 1985a, 1985b, 1990, 1990a.

- mentaria in Aristotelem et alios; 5. Commentaria in Scripturas; 6. Reportationes, Opuscula dubiae authenticitatis; 7. Aliorum Medii Aevi Auctorum Scripta 61.
- c. 1254/6a. In quattuor libros sententiarum Petri Lombardi, in Busa ed. vol. 1.
 - c. 1256/9. *Quaestiones Disputatae de Veritate*, in Busa ed. vol. 3, 1–186.
 - c. 1269/72. Quaestiones Quodlibetales, Quodlibet 4, in Busa ed. 3, 438–501.
 - i. 1271/3. *Summa theologiae tertia pars*, in Busa ed. 2, 768–926.
- Allen, Barry 1994. Is Locke's Semiotic Inconsistent? *The American Journal of Semiotics* 11(3/4): 23–31.
- Augustine of Hippo 397. *Aureli Augustini Confessionum Libri Tredecim*, Latin text in O'Donnell 1992: I, 1–205; English text *Confessions Books I–XIII*, trans. F. J. Sheed, introduced by Peter Brown. Indianapolis: Hackett Publishing Co.
- i. 397–426. *De doctrina christiana libri quattuor* (Four Books On Christian Doctrine). In: Tomus Tertius Pars Prior, 13–151; also *Patrologiae Cursus Completus*, ed. J. P. Migne, *Series Latina* (PL), Volume 34, cols. 15–122.
- Bacon, Roger c. 1267. De Signis. In: Fredborg, Nielsen, and Pinborg(eds.), *Traditio*. Volume XXXIV. New York: Fordham University Press, 1978, 81–136.
- Beuchot, Mauricio 1980. La doctrina tomista clásica sobre el signo: Domingo de Soto, Francisco de Araújo y Juan de Santo Tomás. *Critica* 12(36) (México, diciembre), 39–60.
- 1983. Lógica y lenguaje en Juan de Sto. Tomás. *Diánoia* 17.
 - 1986. Signo y Lenguaje en San Agustín. *Diánoia* (anuario de filosofía) 32: 13–26.
 - 1987. *Metafísica. La Ontología Aristotélico-Tomista de Francisco de Araújo*. México City: Universidad Nacional Autónoma de México.
 - 1993. La percepción sensible en Santo Tomás de Aquino. In: Benítez, Laura; Robles, José A. (eds.), *Percepción: Colores* (= La Filosofía y Sus Problemas; México City: Universidad Nacional Autónoma, Instituto de Investigaciones Filosóficas), 11–29.
 - 1994. Intentionality in John Poinsett. *ACPQ* 68(3) (Summer 1994): 279–296.
 - 1995. *Algunas Teorías del Signo en la Escolástica Iberica Post-Medieval*, selección de textos, introducción y traducción. Maracaibo y Caracas, Venezuela: Universidad del Zulia y Universidad Católica Andrés.
 - 1998. Bañez, Domingo (1528–1604), entry. *Routledge Encyclopedia of Philosophy*, ed. in 10 volumes by Edward Craig. London: Routledge, 1, 647–649.
- Beuchot, Mauricio, and Deely, John 1995. Common Sources for the Semiotic of Charles Peirce and John Poinsett. *Review of Metaphysics* 48(3) (March): 539–566.

- Deely, John 1971. *The Tradition via Heidegger. An essay on the meaning of being in the philosophy of Martin Heidegger*. The Hague: Martinus Nijhoff.
- 1977. ‘Semiotic’ as the Doctrine of Signs. *Ars Semeiotica* 1(3): 41–68.
- 1978. What’s in a Name. *Semiotica* 22(1/2): 151–181 (essay review of Sebeok 1976).
- 1982. *Introducing Semiotic: Its History and Doctrine*. Bloomington: Indiana University Press; trans. by Vivina de Campos Figueiredo as *Introdução à Semiótica: historia e doutrina*. Lisbon, Portugal: Fundação Calouste Gulbenkian, 1995.
- 1982a. On the Notion “Doctrine of Signs”, Appendix I — Deely 1982: 127–130.
- 1985. Semiotic and the Liberal Arts. *The New Scholasticism* 59(3) (Summer): 296–322. The “second epsilon” mentioned in this work is a blunder, for the “first epsilon” in the Greek “semeiotic” is not an epsilon but an eta, thus: Σημειωτική.
- 1986. John Locke’s Place in the History of Semiotic Inquiry. In: Deely, John; Lanham, Jonathan Evans (eds.), *Semiotics 1986*. MD: University Press of America, 406–418.
- 1986a. Semiotic in the Thought of Jacques Maritain. *Recherche Sémiotique/Semiotic Inquiry* 6(2): 1–30.
- 1986b. *Doctrine*, terminological entry for the *Encyclopedic Dictionary of Semiotics*, ed. Thomas A. Sebeok et al. Berlin: Mouton de Gruyter, Tome I, 214.
- 1989. *The Grand Vision*, presented on September 8 at the September 5–10 Charles Sanders Peirce Sesquicentennial International Congress at Harvard University, forthcoming in Colapietro and Olschewsky 1994. This essay was first published in the *Transactions of the Charles S. Peirce Society* 30(2) (Spring 1994): 371–400, but, inexplicably, after the submission of corrected proofs, the journal repaged the whole and introduced such extreme errors as to make the text unreadable at some points. The correct version has appeared as Chapter 7 of Deely 1994a: 183–200.
- 1990. *Basics of Semiotics*. Bloomington: Indiana University Press.
- 1990a. Logic Within Semiotics. In: Bernard, Jeff; Deely, John; Prewitt, Terry; Voigt, Vilmos and Withalm, Gloria (eds.), *Symbolicity*. MD: University Press of America, 1993, 77–86; *Symbolicity* is bound together with *Semiotics 1990*, ed. Karen Haworth, John Deely, and Terry Prewitt as a single volume.
- 1991. Semiotics and Biosemiotics: Are Sign-Science and Life-Science Coextensive? In: Sebeok, Thomas A.; Umiker-Sebeok, Jean (eds.), *Bio-semiotics. The Semiotic Web 1991*. Berlin: Mouton de Gruyter, 1992, 45–75. Since revised as Chapter 6 How Do Signs Work? — Deely 1994a: 151–182.
- 1993. Locke’s Proposal for Semiotics and the Scholastic Doctrine of Species. *The Modern Schoolman* 70(3) (March): 165–188.

- 1994. *The Human Use of Signs; or Elements of Anthropesemiosis*. Lanham, MD: Rowman & Littlefield.
 - 1994a. *New Beginnings. Early Modern Philosophy and Postmodern Thought*. Toronto, Canada: University of Toronto Press.
 - 1994b. Why Investigate the Common Sources of Charles Peirce and John Poinsett? In: Spinks, C. W.; Deely, John (eds.), *Semiotics 1994*. New York: Peter Lang Publishing, 1995, 34–50.
 - 1994c. Locke's Philosophy vs. Locke's Proposal for Semiotic. *The American Journal of Semiotics* 11(3/4): 33–37.
 - 1995. Ferdinand de Saussure and Semiotics. In: Tasca, Norma (ed.), *Ensaio em Homenagem a Thomas A. Sebeok*, quadruple Special Issue of *Cruzeiro Semiótico*. Porto, Portugal: Fundação Eng. António de Almeida, 75–85.
 - 1996a. *Los Fundamentos de la Semiótica*, trans. José Luis Caivano. Mexico City, Mexico: Universidad Iberoamericana. An expanded text of Deely 1990.
 - 1996a. The Four Ages of Understanding between Ancient Physics and Postmodern Semiotics. In: Spinks, C. W.; Deely, J. N. (eds.), *Semiotics*. New York: Peter Lang Publishing, Inc., 1997, 229–240.
 - 1997. How Is the Universe Perfused with Signs? In: Spinks, C. W.; Deely, J. N. (eds.), *Semiotics*. New York: Peter Lang Publishing, Inc., 1998, 389–394.
 - 1997a. Quid Sit Postmodernismus? *Postmodernism and Christian Philosophy* (a Proceedings of the American Maritain Association; Washington, D C: Catholic University of America Press), 68–96.
 - 1998. Physiosemeiosis and Semiotic. In: Spinks, C. W.; Deely, J. N. (eds.), *Semiotics*. New York: Peter Lang Publishing, Inc., 1999.
 - 1998a. The Ethics of Terminology. In: Colapetrio, Vincent (ed.), *ACPQ Special Issue on Peirce*, 72(2): 197–243.
 - 2000. *What Distinguishes Human Understanding?* South Bend, St. Augustine's Press.
 - 2000a. *Four Ages of Understanding. The first postmodern history of philosophy from ancient times to the turn of the 21st century*. Toronto, Canada: University of Toronto Press.
- Deely, John N.; Williams, Brooke and Kruse, E. Felicia (eds.). 1986. *Frontiers in Semiotics*. Bloomington: Indiana University Press. Preface titled "Pars Pro Toto", viii–xvii; Description of Contributions, xviii–xxii.
- Doyle, John P. 1984. The Conimbricenses on the Relations Involved in Signs. In: Deely, John (ed.), *Semiotics*. Proceedings of the Ninth Annual Meeting of the Semiotic Society of America; Lanham, MD: University Press of America, 1985, 567–576.
- 1994. Poinsett on the Knowability of Beings of Reason. *American Catholic Philosophical Quarterly* 58(3) (Summer 1994): 337–362.

- Eco, Umberto; Lambertini, Roberto; Marmo, Costantino and Tabarroni Andrea 1986. *Latratus Canis or: The Dog's Barking* — Deely, Williams, and Kruse 1986: 63–73.
- Fisch, Max H. 1978. Philodemus and Semiosis (1879–1883), Section 5 of the essay Peirce's General Theory of Signs. In: Sebeok, Thomas A. (ed.), *Sight, Sound, and Sense*. Bloomington: Indiana University Press, 31–70.
- Heidegger, Martin 1947. Brief über den Humanismus. *Platons Lehre von der Wahrheit*. Bern: Francke Verlag. A separate and independent edition of the so-called Letter on Humanism was published in 1949 by Klosterman of Frankfurt.
- Hill, Archibald A. 1948. The Use of Dictionaries in Language Teaching. *Language Learning* 1: 9–13.
- 1958. Introduction to Linguistic Structures. From sound to sentence in English. New York: Harcourt, Brace.
- Manetti, Giovanni 1993. *Theories of the Sign in Classical Antiquity*. Bloomington: Indiana University Press, trans. by Christine Richardson of *Le teorie del segno nell'antichità classica*, Milan: Bompiani, 1987.
- Maritain, Jacques *Note*: the writings of Maritain are so diverse and have appeared in so many translations with so many modifications that it needs to be noted that in the thirteen years spanning 1983 and 1995 the Cercle d'Etudes Jacques et Raïssa Maritain (in the persons of Jean-Marie Allion, Maurice Hany, Dominique and René Mougel, Michel Nurdin, and Heinz R. Schmitz) established the definitive text of all the writings and brought them to publication in 15 volumes entitled *Jacques et Raïssa Maritain. Oeuvres Complètes*. Editions Universitaires Fribourg Suisse et Editions Saint-Paul Paris, 1983–1995. In citing Maritain from this set, I will abbreviate it to OC (for *Oeuvres Complètes*) followed by volume number in Roman numerals and pages in Arabic numbers.
- 1937–1938. Sign and Symbol, trans. Mary Morris for the *Journal of the Warburg Institute* I: 1–11.
- 1938. Signe et Symbole. *Revue Thomiste* 44 (April): 299–330.
- 1943. Sign and Symbol, English trans. by H. L. Binsse of 1938 entry above q.v., but with footnotes separated from the text proper at the end of the volume. *Redeeming the Time*. London: Geoffrey Bles, text 191–224, Latin notes 268–276.
- 1956. Le Langage et la Theorie du Signe, Annexe au Chapitre II of *Quatre Essais sur l'Esprit dans sa Condition Charnelle* (nouvelle edition revue et augmentée; Paris: Alsatia), 113–124. This Chapitre II is the text of the entry for 1938 above.
- 1957. Language and the Theory of Sign. In: Anschen Ruth Anda (ed.), *Language: An Enquiry into Its Meaning and Function*. New York: Harper and Brothers, 86–101. Text of 1956 entry preceding, but with several paragraphs added near the beginning to make the essay self-contained when published apart from the 1938 main essay text. These added paragraphs summarize the section The Theory of the Sign in 1943: 191–195,

- to which the extensive Latin notes drawn from Poinsett's 1632 treatise on signs are appended. The 1957 English text is being reprinted with the full Poinsett references to 1632a restored, and with some glosses added from the 1943 English trans. of the 1938 main entry, in Deely, Kruse, and Williams, eds., 1986: 49–60.
- 1966. *Le Paysan de la Garonne*, in OC 12: 663–1035.
- Meier-Oeser, Stephan 1995. Entry Semiotik, Semiologie. In: Ritter, Joachim and Gründer, Karlfried (eds.), *Historisches Wörterbuch der Philosophie*. Basel: Schwabe, Band 9, cols. 601–608.
- 1997. *Die Spur des Zeichens. Das Zeichen und seine Funktion in der Philosophie des Mittelalters und der frühen Neuzeit*. Berlin: Walter de Gruyter.
- Peirce, Charles Sanders. Note: all eight volumes of *The Collected Papers of Charles Sanders Peirce*, Vols. I–VI ed. Charles Hartshorne and Paul Weiss (Cambridge, MA: Harvard University Press, 1931–1935), Vols. VII–VIII ed. Arthur W. Burks (same publisher, 1958), are now available in electronic form in an edition prepared by Charlottesville, VA: Intele Corporation, 1994.
- 1898 Lecture series, Detached Ideas on Vitrally Important Topics (the passage in CP 4.1 is from Lecture 2).
- 1903. *The Ethics of Terminology from A Syllabus of Certain Topics of Logic*. Boston: Alfred Mudge & Son, 10–14; reprinted in CP 2.219–2.226 continuing 1.202 (Burks p. 295).
- Philodemus 1978. Περὶ σημειώσεων (*De Signis*), trans. as *On the Methods of Inference* in the ed. of Phillip Howard De Lacy and Estelle Allen De Lacy, rev. with the collaboration of Marcello Gigante, Francesco Longo Auricchio, and Adele Tepedino Guerra. Naples: Bibliopolis, Greek text 27–87, English 91–131.
- Poinsett, John 1632. *Tractatus de Signis. The Semiotic of John Poinsett*, critical edition presented and translated by John Deely with the assistance of Ralph Austin Powell (first independent edition; Berkeley, CA: University of California Press, 1985). Available also in electronic form (Charlottesville, VA: Intele Corp., 1992).
- Romeo, Luigi 1976. Heraclitus and the Foundations of Semiotics. *Versus* 15(5) (dicembre): 73–90. Reprinted without the brief section on philological sources (75–79) in Deely, Williams, & Kruse 1986: 224–234.
- 1977. The Derivation of 'Semiotics' through the History of the Discipline. *Semiosis* 6(2): 37–49.
- 1979. Pedro da Fonseca in Renaissance Semiotics: A Segmental History of Footnotes. *Ars Semeiotica* 2(2): 190ff.
- Saussure, Ferdinand de 1916. *Cours de linguistique générale* (Paris: Payot). Lectures delivered at the University of Geneva i. 1906–1911 and posthumously published from auditors' notes by Charles Bally and Albert Sechehaye with the collaboration of Albert Riedlinger.

- Sebeok, Thomas A. 1971. 'Semiotic' and Its Congeners. In: Jazayery, Mohammed Ali; Polomé, Edgar C.; Winter Werner (eds.), *Linguistic and Literary Studies in Honor of Archibald Hill, I: General and Theoretical Linguistics*. Lisse, Netherlands: Peter de Ridder Press, 283–295; reprinted in Sebeok 1985: 47–58, and in Deely, Williams and Kruse 1986: 255–263.
- 1975. The Semiotic Web: A Chronicle of Prejudices. *Bulletin of Literary Semiotics* 2: 1–63; reprinted “with essential corrections and additions” — Sebeok 1976: 149–188, to which reprint page numbers in the present monograph are keyed.
- 1975a. Zoosemiotics: At the Intersection of Nature and Culture. In: Sebeok, T.A. (ed.), *The Tell-Tale Sign*. Lisse, the Netherlands: Peter de Ridder Press, 85–95.
- 1976. *Contributions to the Doctrine of Signs* (= Sources in Semiotics IV; Lanham, MD: University Press of America, 1985 reprint with a new Preface by Brooke Williams of the original book as published by Indiana University, Bloomington, and The Peter De Ridder Press, Lisse).
- 1979. Semiosis in Nature and Culture, as reprinted. *The Sign & Its Masters* (= Sources in Semiotics VIII; Lanham, MD: University Press of America, 1989), 3–26.
- 1984. *Vital Signs*, Presidential Address delivered October 12 to the ninth Annual Meeting of the Semiotic Society of America, Bloomington, Indiana, October 11–14; subsequently printed in *The American Journal of Semiotics* 3(3): 1–27, and reprinted in Sebeok 1986: 59–79.
- 1984b, June 3. *The Evolution of Communication and the Origin of Language* — lecture in the June 1–3 ISISSS '84 Colloquium on Phylogeny and Ontogeny of Communication Systems. Published under the title Communication, Language, and Speech. Evolutionary Considerations — Sebeok 1986: 10–16.
- 1984c. Symptom, Chapter 10 of *New Directions in Linguistics and Semiotics*, ed. James E. Copeland. Houston: Rice University Studies, 212–230.
- 1985. *Contributions to the Doctrine of Signs* (= Sources in Semiotics IV; reprint of 1976 original with an extended Preface by Brooke Williams, Challenging Signs at the Crossroads [Williams 1985], evaluating the book in light of major reviews; Lanham, MD: University Press of America).
- 1987. Language: How Primary a Modeling System. In: Deely, John (ed.), *Semiotics*. Lanham, MD: University Press of America, 1988, 15–27.
- 1989. *The Sign & Its Masters* (= Sources in Semiotics VIII; Lanham, MD: University Press of America). Corrected reprint with a new author's Preface and editor's Introduction of the University of Texas Press 1979 original imprint.
- 1996. Galen in Medical Semiotics. *Interdisciplinary Journal for Germanic Linguistics and Semiotic Analysis* 1(1) (Spring): 89–111.
- Santaella-Braga, Lúcia. 1991. John Poinsett's Doctrine of Signs: The Recovery of a Missing Link. *The Journal of Speculative Philosophy*, New Series, 5(2): 151–159.

- 1992. *A Assinatura das Coisas*. Rio de Janeiro: Imago Editora.
- 1994. *The Way to Postmodernity*, preface — Deely 1994a: xv–xvi
- Tasca, Norma (ed.) 1995. *Ensaio em Homagem a Thomas A. Sebeok*, quadruple Special Issue of *Cruzeiro Semiótico*. Porto, Portugal: Fundação Eng. António de Almeida.
- Weinberg, Julius Rudolph 1965. *Abstraction, Relation, and Induction: three essays in the history of thought*. Madison, WI: University of Wisconsin Press.
- Williams, Brooke 1984. Preface to *Logic, Philosophy, and History* (A. F. Russell 1984).
- 1985. *Challenging Signs at the Crossroads* — prefatory essay to Sebeok 1985: xv–xlii.
- 1985a. *History and Semiotic*. Toronto Semiotic Circle Monograph, No. 4; Victoria University of the University of Toronto.
- 1985b. What Has History To Do with Semiotics. *Semiotica* 54.3/4: 267–333.
- 1990. Uma década de debates: História e Semiótica nos anos 80”, *Face* 3(1) (janeiro/junho): 11–28.
- 1990a. Re-posing the Objectivity Question. In: Haworth, Karen; Deely, John; Prewitt Terry (eds.), *Semiotics*. Lanham, MD: University Press of America, 1991, 87–95
- 1991. History and Semiotics in the 1990s. *Semiotica* 83 (3/4): 385–417.
- Williams, Brooke, and Pencak, William (eds.) 1991. *Special Issue: History and Semiotics*, *Semiotica* 83 (3/4).

Семиотика как переоткрытие бессознательного культуры в постмодернистскую эпоху

В данной статье мы исследуем терминологию семиотики с целью выявить исторические слои человеческого опыта и понимания, способствовавшие превращению учения о знаках в одно из течений современной мысли. Исходя в основном из хайдеггеровской концепции языка как эвристической гипотезы, мы анализируем термин “семиотика” и выявляем, что Бл. Августин впервые придал латинскому слову “signum” тот смысл, который сделал возможным появление общего учения о знаках, а понятие знака как общего модуса бытия, конкретно верифицируемого и в природе, и в культуре в процессе структурирования человеческого опыта, было обосновано лишь в позднейшей латинской традиции в соответствии с объяснением возможности такого модуса бытия. Далее мы рассматриваем причины того, почему уже в современную эпоху Чарльз Пирс вер-

нулся к латинской традиции обоснования понятия знака, в основном завершённой в работах Пуансо. Оставаясь в рамках той же самой традиции, мы пытаемся понять, почему термин “семиотика” возник в качестве, так сказать, *логического наименования* глобального интереса к знакам.

Semiootika kui kultuuri mitteteadvuse uuestiavastamine postmodernistlikul ajajärgul

Artiklis vaadeldakse semiootilist terminoloogiat eesmärgiga tuua välja inimkogemuse ja arusaamise ajaloolised kihid, mis tegid võimalikuks märgidoktriini tekkimise tänapäevases mõistes. Lähtudes peamiselt Heideggeri arusaamast keelest kui heuristilisest hüpoteesist, uuritakse nime-
tust semiootika ja jõutakse järeldusele, et vaid tänu Augustinuse poolt kasutatavale ladinakeelsele terminile *signum* sai võimalikuks üldise märgidoktriini tekkimine. Just ladina kultuuri hilisperioodil kerkib esmakordselt esile märgi kui looduses ja kultuuris olemise üldmooduse inimekonna kogemuse struktureerimisprotsessi käigus verifitseeritav mõiste. Ladinakeelne tõestusliin oli lõpuni viidud Poinot' töödes ja selle tänapäevane taastagasitulek sai teoks läbi Peirce'i. Jäädes selle traditsiooni raamesse, vaadeldakse termini *semiootika* esilekerkimist *loogilise nimetusena* globaalsele märgihuvile.

Umberto Eco's semiotic threshold

Winfried Nöth

University of Kassel,
Georg-Forster-Str. 3, D-34109 Kassel, Germany
e-mail: noeth@uni-kassel.de

Abstract. The "semiotic threshold" is U. Eco's metaphor of the borderline between the world of semiosis and the nonsemiotic world and hence also between semiotics and its neighboring disciplines. The paper examines Eco's threshold in comparison to the views of semiosis and semiotics of C. S. Peirce. While Eco follows the structuralist tradition, postulating the conventionality of signs as the main criterion of semiosis, Peirce has a much broader concept of semiosis, which is not restricted to phenomena of culture but includes many processes in nature. Whereas Eco arrives at the conclusion that biological processes, such as the ones within the immune system, cannot be included in the program of semiotic research, Peirce's broader definition of semiosis has meanwhile become the foundation of semiotic studies in biology and medicine and hence in biosemiotics and medical semiotics.

1. The boundaries of Eco's semiotic field

Umberto Eco's semiotic threshold raises the question of the dividing line between the semiotic and the nonsemiotic world. In his *Theory of Semiotics*, Eco (1976: 9, 5) describes the area of contemporary research in semiotics as the "semiotic field" and defines the dividing lines between this field and the nonsemiotic world as "boundaries or thresholds". He distinguishes between transitory and immutable boundaries. There are two kinds of transitory boundaries, the political and the epistemological ones. The political boundaries are determined by the present limitations of the state of the art in current semiotic research and should therefore be crossed with the advance in semiotic

theory. The epistemological boundaries represent the dividing line between semiotics as a theory and its object of study, and thus between theory and practice. The semiotician's crossing of this boundary should be one of critical intervention. Semiotic theory should affect semiotic practice. The result of such intervention should be a permanent remodeling of the semiotic landscape.

The boundaries to be investigated in the following are only the immutable ones. Eco (1976: 6) calls them the natural boundaries and defines them as "those beyond which a semiotic approach cannot go; for there is a nonsemiotic territory [...of] phenomena that cannot be taken as sign functions". Eco's semiotic field is separated from the nonsemiotic world by two kinds of natural boundaries, which he discusses as the lower and the upper threshold of semiotics.

The lower threshold represents the dividing line between the semiotic and the presemiotic world. To Eco (1976: 19–21), this threshold is the one that separates nature from culture. Since his theory is programmatically a semiotics of culture and of signs which presuppose social convention, processes in the domain of biological or physical nature are by definition excluded from semiotics. Thus, Eco comes to the conclusion that only signs based on codes and convention constitute the semiotic field, whereas stimuli, signals or physical information are below the semiotic threshold where "semiotic phenomena arise from something nonsemiotic" (Eco 1976: 21). The purpose of my paper will be to show that, from the perspective of general semiotics, Eco's lower semiotic threshold is too high and can be lowered to account for processes of semiosis in culture and in nature.

Eco's upper semiotic threshold is the dividing line between the semiotic and various other nonsemiotic perspectives of the world. Even within the domain of culture, which belongs most certainly to the semiotic field, we are not always exclusively confronted with sign phenomena, according to Eco (1976: 27). Objects of culture, for example, are not only signs. They are also physical objects constructed according to mechanical laws; they have an economic value and may have a social function. Possible nonsemiotic perspectives from which our cultural objects can then be considered are thus the physical, the mechanical, the economic, and the social perspectives, and these, according to Eco, are the perspectives from beyond the upper semiotic threshold.

2. Semiotics and the other sciences

The semiotic perspectivism which Eco adopts in this context belongs to one of the most fruitful approaches to the question of the dividing line between semiotics and other sciences. It provides the appropriate argument against the reproach of semiotic imperialism (Eco 1976: 6–7), according to which semioticians dare to deal with too many phenomena, whose study should better be left to the specialists of other disciplines. Against this reproach, the perspectivist argues that semiotics does not aim at substituting its neighboring sciences, but rather at contributing a different perspective to the study phenomena that can be investigated from several points of view. The authority to which Eco (1976: 16) refers in this context is Morris (1938: 4), who argued that “semiotics, then, is not concerned with the study of a particular kind of object, but with ordinary objects in so far (and only in so far) as they participate in semiosis”. A somewhat different perspectivism is also inherent in Hjelmslev’s (1943: 108) view of semiotics as “a common point of view for a large number of disciplines from [...] literature [...] to mathematics”. To Hjelmslev (1943: 77–78; 1954: 50), this world beyond semiotics is the amorphous and nebulous domain of content and expression purport. Language gives one kind of structure to this domain, namely a semiotic one, but Hjelmslev also recognizes that there are other sciences, such as physics or anthropology, which impose different kinds of structure to the same domain (cf. Nöth 1990: 68). While both Morris and Hjelmslev are thus semiotic perspectivists, the perspectives they take are quite opposed. Whereas Morris (1946: 80) wanted to establish a theory of signs “on a biological basis”, Hjelmslev’s basis of semiotics was the structure of language.

3. Eco between biosemiotic expansionism and linguosemiotic reductionism

Between these two extremes of semiotic expansionism and linguosemiotic reductionism, we find Eco as steering a middle course, pleading on the one hand for an extension, and on the other hand for a restriction of the semiotic field. In contrast to semioticians such as Buysens (1943) and Prieto (1966), Eco extends the semiotic field by including both natural signs, even signs from a nonhuman source, and

unintentional signs in the domain of semiotic study (Eco 1976: 15). Unlike Morris and Peirce, he restricts the semiotic field by insisting on social and cultural convention as a criterion of signs. Signals which are not based on convention, mere stimuli, and even the flow of information in machine-to-machine communication are not categorically excluded from Eco's semiotic scope, but they are classified as threshold phenomena which are of interest to semiotics only insofar as they participate in sign processes (Eco 1976: 41).¹ In a similar way, we find the study of communication as a threshold phenomenon of Eco's semiotics. The definition which Eco (1976: 8) gives to the semiotics of communication in contrast to the semiotics of signification is exactly opposed to the way in which BuysSENS (1943) and Prieto (1966) distinguish these two domains (cf. Nöth 1990: 172). Communication, according to Eco, is more generally the flow of signals, which may be signs or not, to a destination, which may be human or nonhuman, while signification presupposes signs and a human being as a destination. Thus, phenomena of signification always belong to the semiotic field, while communication may also occur below Eco's semiotic threshold.

4. Sign, code, convention, and nature

Since semiotics, according to Eco (1976: 7) "is concerned with everything that can be taken as a sign", Eco's definition of the sign can give us further insights into the delimitation of his semiotic field. Two of his criteria of a sign seem to establish a rather high semiotic threshold: conventionality or codedness, and the potential of being used to tell a lie. As far as the latter is concerned, Eco has recently abandoned his famous claim that "semiotics is in principle the discipline studying everything which can be used in order to lie" (Eco 1976: 7). In fact, the criterion was too strong. Lies are defined in opposition to truth, and it is well known that the true-false dichotomy is hardly relevant to the study of many sign phenomena, such as pictures or architecture (cf. Nöth 1997a). In Toronto, in 1995, Eco himself reduced this criterion to a weaker formula which states that "a sign is anything you can use to say something that is not necessarily the case", and with this

¹ For a broader semiotic view of semiosis in machine-to-machine interaction see also Nöth 1997b.

formulation, we are close to the structuralist view of the sign as being based on the principle of opposition (cf. Nöth 1994c).

The second criterion, conventionality, serves to differentiate between signs and nonsigns, such as mere stimuli. Eco (1976: 19) argues "since everything can be understood as a sign if and only if there exists a convention which allows it to stand for something else, and since some behavioral responses are not elicited by convention, stimuli cannot be regarded as signs". For the same reason, lack of conventionality, there are signals which are not signs because they are mere "units of transmission which can be computed quantitatively irrespective of their possible meaning" (Eco 1976: 20).

The criterion of conventionality is also the key to Eco's perspective of culture as a semiotic phenomenon (Eco 1976: 26–27): meanings are cultural units organized in oppositions and structures according to a code. Now, culture has traditionally been opposed to nature. How does Eco then account for natural signs in the framework of his cultural semiotics? How can the idea of conventionality be reconciled with the idea of natural signs, for example, symptoms or natural indices such as smoke indicating a fire or a wet spot indicating the fall of a raindrop? The semiotic bridge which Eco's approach offers between nature and culture consists in what I would like to call a radical culturalization of nature.

5. Eco's culturalization of nature

According to Eco's theory of semiotics, nature can be seen from a nonsemiotic and from a semiotic perspective. The nonsemiotic perspective is, for example, characteristic of everyday inferences (Eco 1976: 17). When we infer from smoke the presence of fire or from a wet spot the fall of a raindrop, or more generally, from a natural effect its natural cause, such inferences are not yet signs, according to Eco, but they can become signs if the association between cause and effect is the result of cultural learning and coding. The same phenomena can thus appear as inferential nonsigns and as cultural signs, depending on the absence or presence of conventionality and coding in the association between cause and effect. Eco exemplifies this transformation between the nonsemiotic and the semiotic from various domains of nature. At the level of physical nature, he argues that smoke, as long as it is perceived along with the fire which it causes is not a sign of it,

“but smoke can be a sign-vehicle standing for a nonvisible fire, provided that a social rule has necessarily and usually associated smoke with fire” (Eco 1976: 17). The somewhat surprising distinction between these two cases, smoke seen in the presence or in the absence of the fire, has probably also to do with Eco’s definition of the sign as something “which can be taken as significantly substituting for something else” (Eco 1976: 7). Eco probably believes that smoke seen in the presence of fire does not imply such a process of substitution. This view of a semiotic threshold existing between perceived and unperceived referent is related to Eco’s argument that mirror images are no signs. Here, too, we have the simultaneity in the perception of the image in the mirror and its referent, the person in front of the mirror (Eco 1984: 202).

At the biological level, Eco argues that medical symptoms are only signs when they are recognized by the tradition of a medical doctrine:

The first doctor who discovered a sort of constant relationship between an array of red spots on the patient’s face and a given disease (measles) made an inference: but insofar as this relationship has been made conventional and has been registered as such in medical treatises, a *semiotic convention* has been established. There is a sign every time a human group decides to use and to recognize something as the vehicle of something else (Eco 1976: 17).

At the level of human nonverbal communication, Eco (1973: 39) gives the example of spontaneous, noncodified expressions of emotions produced without any communicative intention to illustrate nonverbal phenomena below the semiotic threshold and argues that the same phenomena become codified and thus semiotic as soon as they exhibit cultural variation or are simulated or imitated in a histrionic context.

At the level of human artifacts, Eco’s (1973: 43) example is Roland Barthes’s raincoat, which is nonsemiotic insofar as it merely protects against rain, but semiotic insofar as it is a product of cultural fashion or as an indicator of the particular meteorological situation in which it is used. In sum, as soon as systems of convention intervene in the interpretation of natural phenomena and cultural artifacts, the semiotic threshold is crossed.

However, where does convention begin, and where does nature end? Eco gives no clear answer. Cognitive science, for example, has been emphasizing the dependence of cognition on the structure of the human mind and the impossibility of any direct access to the “real” nature of the phenomena. Many of our cognitions are universal and

not culturally variable since they have developed according to universal laws of biological evolution (cf. Nöth 1994a). In the light of cognitive science, the dogma of cultural arbitrariness has more and more been questioned. Not even the favorite topic of cultural relativity, the semiotics of color names, has escaped from the universalist perspective of cognitive psychology, as Berlin and Kay (1969) have shown. Can the dogma of arbitrariness and conventionality thus still be accepted as the sole criterion of semioticity? In my view, Eco's semiotics suffers from overemphasizing this criterion. Conventionality is the basis of one mode of semiosis, but not the decisive criterion to distinguish between the nonsemiotic and the semiotic world. I would like to defend this argument with reference to Peirce's more general semiotic theory.

6. Eco's vs. Peirce's semiotic threshold

Peirce is one of Eco's crown witnesses for a desirable broadening of the semiotic field from its Saussurean logocentric restrictions (Eco 1976: 15–17). As far as the semiotic threshold is concerned, however, Eco's reading of Peirce is either incomplete or it results in a rejection of an approach to semiosis that Eco considers too broad. As we have seen above, Eco rejects Peirce's interpretation of inference as semiosis as being too broad from the premises of his own cultural semiotics (cf. Eco 1976: 17). Eco's interpretation of Peirce is incomplete, when he argues that Peirce's triad of sign, object, and interpretant "can also be applied to phenomena that do not have a human emitter, provided that they do have a human receiver, such being the case with meteorological symptoms or any other sort of index" (Eco 1976: 16).

In fact, the occurrence of signs and semiosis, according to Peirce, is not restricted to human receivers, but presupposes a much more general category which he calls mind. Mind, however, in Peirce's semiotics, does not only mean the human mind (cf. Santaella 1994). It includes the triadic interaction of any organism with its environment (cf. Nöth 1994b: 2–4). Peirce even goes so far as to extend the category of mind to nonbiological phenomena (CP 7.374). The action of mind in physical nature, according to Peirce's evolutionary philosophy, is the action of final causation, but let us focus only on the bio-semiotic threshold in the following.

The semiotic threshold which Peirce postulates is thus not the one between human and nonhuman minds, but between dyadic and triadic interactions. Semiosis begins when we cross the threshold from mere dyadic interactions between mechanical, chance, or "brute" (efficient) causes and their effects to triadic interactions mediated by a mind in the broadest sense. A semiotic triad is one in which a mind interprets (i.e., forms an *interpretant* of) a signifying stimulus in its environment, called *representamen*, relative to a goal (the *object*) which is distinct from this environmental stimulus, but not necessarily absent in the given situation. This interaction requires neither consciousness nor intentionality, but must be goal-directed. Metabolic "reactions" of an organism to environmental stimuli are goal-directed actions. Organisms select and hence evaluate, environmental energy or matter *for the purpose* of their own biological survival, while at the same time rejecting other environmental stimuli as unsuitable. In a similar way, the immune system exhibits goal-directed triadic interactions of a semiotic nature. The senders of immunological messages in the blood serum of an animal are the antigens, i.e., molecules of foreign substances such as bacteria or viruses. The receivers of these messages are the antibody molecules produced by the B-lymphocytes and the leukocytes, which are equipped with a multitude of receptors *for the purpose* of detecting the antigens (cf. Nöth 1994c: 49). Such processes exemplify semiotic thirdness above the lowest biosemiotic threshold (Nöth 1994b: 4).

On the premises of his cultural semiotics, Eco explicitly rejected the legitimacy of a place of such phenomena within his semiotic field. In his paper "On semiotics and immunology", which he contributed to the 1987 international conference on *The Semiotics of Cellular Communication in the Immune System*, Eco (1988) declared, to the disappointment of the assembled biosemioticians, that interpretations of immunological processes in terms of categories such as "communication", "sign perception", or "semiosis" are mere models or metaphors used in a domain other than the semiotic field. In this paper, he expresses the anthropocentric and cultural bias of his semiotics more clearly than in his *Theory of Semiotics*, when he states:

I can certainly say that if a dog wags its tail this means that it is happy or that if I see red spots on the face of a person this means the person has measles: but neither the dog nor the person follow the rules of a sign-system. If there is a sign system, it belongs to my competence and represents a semiotic rule I use to interpret events as if they were communi-

cating something to me. I guess that if an immunologist sees (if possible) a given lymphocyte doing so and so, he will be able to predict that something so and so will happen or had happened. But such a principle is common to all scientific research as well as to normal experience in our everyday life. [...] Nucleotides do not know that A 'means' U. They simply react by substituting A with U. We cannot say that nucleotides behave semiotically because we are unable to prove that they can refrain from interpreting or that they can choose alternative interpretations. (Eco 1988: 7-8).

In addition to anthropocentric and cultural bias, Eco's last argument testifies to another bias, which I would like to call his synchronic bias. Of course, the nucleotides are not equipped with the capacity for alternatives in the interpretations of their environment, but this is true only in a synchronic perspective. From the point of view of biological evolution, we certainly have had alternatives which began with mutations and the ensuing evolutionary preferences for the survival of the fittest.

Nevertheless, Eco's proposal for a semiotic threshold between mere stimuli and cultural signs seems to be related to Peirce's dividing line between dyadic and triadic process insofar as stimulus-response chains seem to be dyadically connected in an automatic sequence, whereas signs are culturally mediated. In fact, this is Eco's own argument. "A stimulus-response process", thus Eco (1988: 8) "is a dyadic one: A provokes B and must be present in order to elicit B (equally present). I understand that the requisite of the co-presence is a very ambiguous one. A stimulus-response is certainly a causal sequence."

Such a categorically asemitic interpretation of stimulus-response sequences is not in accordance with Peirce's broad concept of semiosis. The response of an organism to a stimulus is determined by the disposition of the nervous system, which has evolved according to evolutionary laws. If it is "automatic", there is predictability, necessity, or generality, and these characteristics transform the seemingly dyadic interaction into a semiotic triad. At the same time, the stimulus-response example illustrates the essential difference between Eco's and Peirce's semiotic thresholds. In contrast to Eco, whose semiotics begins above the threshold of culture, convention, and codedness, Peirce's threshold begins much lower with phenomena determined by law, generality, habit, and final causation, excluding only phenomena determined by chance, mere efficient causation, and phenomena of unreflected firstness (cf. Santaella Braga 1994).

7. The symbolicity of Eco's signs

A final essential respect in which Eco's semiotic field turns out to be much more restricted in comparison with the Peircean one brings us back to Eco's above discussed culturalization of nature and to the topic of the typology of signs. Eco's reluctant inclusion of natural indices in the semiotic field, only on the condition that such signs be sanctioned by a cultural code, actually means that he interprets such indices as symbols. At least, such conclusion suggests itself from a Peircean perspective. Signs established by culture and convention are primarily symbols, according to Peirce, but these are distinguished from icons and indices, which do not primarily depend on coding. The index is interpreted as a sign on the basis of a causality or spatio-temporal connection between the sign and its object, while the icon is interpreted as a sign because of qualities or features which it has in common with its object. This famous Peircean classification of the sign with respect to its object has to do with Peirce's three categories of firstness, secondness, and thirdness. While signs, by definition belong to the category of thirdness, they may exhibit in their object relation to various degrees features of firstness, secondness, and thirdness (cf. Nöth, Santaella 2000): in the icon, we are confronted with a foregrounding of the feature of firstness, in the index with secondness and in the symbol with thirdness. Eco's problems with the category of the iconic sign are well known, and cannot be discussed here in detail. Suffice it to say that it has also to do with the problem of reconciling the feature of firstness in the icon with the one of thirdness in the category of the sign. Our investigation of Eco's semiotic threshold has mainly been concerned with Eco's view of natural indices, which are signs because of their secondness. It may now have become apparent that Eco's culturalization of the natural sign is actually a result of his attempt to admit signs only on criteria of thirdness and not on criteria focusing on secondness.

8. Conclusion

Let me emphasize, in conclusion, that my Peircean perspective on Eco does not imply a criticism of Eco's semiotic theory for the limitations of its scope. Eco's cultural semiotics is certainly consistent in itself.

The boundaries of the semiotic field which he establishes are a logical consequence of his semiotic premises. The fact that Peirce's field is broader is not an argument against Eco's theory of semiotics, but, on the other hand, semioticians are free to opt for either the broader Peircean or the narrower Ecoian field to make headway in the field of semiotic studies.

Although Eco never leaves any doubt about his conviction of the necessity of restricting the semiotic field from the premises of culture, he nevertheless once dares to risk a glance beyond the semiotic threshold established within his own system. At the end of his paper "On semiotics and immunology", Eco concludes with the following remark concerning the threshold between higher and lower biological processes with which we want to conclude our own paper on Eco's semiotic threshold: "As you probably understand," writes Eco (1988: 15), "such a question concerns the dramatic problem of the boundaries between Spirit and Matter, Culture and Nature. — Let me stop. I feel afraid."

References

- Berlin, Brent and Kay, Paul 1969. *Basic Color Terms*. Berkeley: University of California Press.
- Buysens, Eric 1943. *Les langages et le discours*. Bruxelles: Office de la Publicité.
- Eco, Umberto 1973. *Segno*. Milano: Isedi.
- 1976. *A Theory of Semiotics*. Bloomington: Indiana University Press.
- 1984. *Semiotics and the Philosophy of Language*. Bloomington: Indiana University Press.
- 1988. On semiotics and immunology. In: Sercarz, Eli E.; Celada, Franco; Michison, N. Avrion; Tada, Tomio (eds.), *The Semiotics of Cellular Communication in the Immune System*. Berlin: Springer, 3–15.
- Hjelmslev, Louis 1943. *Prolegomena to a Theory of Language*. Madison: University of Wisconsin Press.
- 1954. La stratification du langage. In: Hjelmslev, Louis, *Essais linguistiques*. Copenhagen: Nordisk Sprog- og Kulturforlag, 37–68.
- Morris, Charles W. 1938. *Foundations of the Theory of Signs*. Chicago: Chicago University Press.
- 1946. Signs, language, and behavior. In: Morris, Charles W., *Writings on the General Theory of Signs*. The Hague: Mouton, 73–398.
- Nöth, Winfried 1990. *Handbook of Semiotics*. Bloomington: Indiana University Press.

- 1994a. Semiotic foundations of the cognitive paradigm. *Semiosis* (Baden-Baden) 73: 5–16.
 - 1994b. Introduction. In: Nöth, Winfried (ed.), *Origins of Semiosis: Sign Evolution in Nature and Culture*. Berlin: Mouton de Gruyter, 1–12.
 - 1994c. Oppositions at the roots of semiosis. In: Nöth, Winfried (ed.), *Origins of Semiosis: Sign Evolution in Nature and Culture*. Berlin: Mouton de Gruyter, 37–60.
 - 1997a. Can Pictures Lie? In: Nöth, Winfried (ed.), *Semiotics of the Media: State of the Art, Projects, and Perspectives*. Berlin: Mouton de Gruyter, 133–146.
 - 1997b. Representation in semiotics and in computer science. *Semiotica* 115: 203–213.
- Nöth, Winfried and Santaella, Lucia 2000. Bild, Malerei und Photographie aus der Sicht der Peirceschen Semiotik. In: Wirth, Uwe (ed.), *Die Welt als Zeichen und Hypothese*. Frankfurt: Suhrkamp, 354–374.
- Peirce, Charles Sanders 1931–1958. *Collected Papers*, vols. 1–6 (Hartshorne, Charles and Weiss, Paul, eds.), vols. 7–8 (Burks, Arthur W., ed.). Cambridge: Harvard University Press.
- Prieto, Luis J. 1966. *Messages et signaux*. Paris: Presses Universitaires.
- Santaella Braga, Lucia 1994. Peirce's broad concept of mind. *S: European Journal for Semiotic Studies* 6: 399–411.

“Семиотический порог” Умберто Эко

“Семиотический порог” — это метафора У. Эко для обозначения границы между миром семиозиса и миром несемиотическим а также, следовательно, между семиотикой и смежными дисциплинами. В данной статье “порог” У. Эко рассматривается в сопоставлении со взглядами Ч. С. Пирса на семиозис и семиотику. Тогда как Эко, следуя структуралистской традиции, провозглашает основным критерием семиозиса конвенциональность знаков, пирсовский концепт семиозиса гораздо шире: он не сводится к феноменам культуры, но включает и многие процессы природы. Эко приходит к выводу, что биологические процессы, например, процессы в иммунной системе, не могут быть включены в программу семиотического исследования. Пирсовское широкое определение семиозиса стало, между тем, основой семиотических штудий в биологии и медицине и отсюда в биосемиотике и медицинской семиотике.

Umberto Eco "semiootiline lävi"

"Semiootiline lävi" on Umberto Eco metafoor tähistamaks piiri semioosise ja mittesemiootilise maailma, järelikult ka semiootika ja temaga piirnevate distsipliinide vahel. Antud artiklis vaadeldakse U. Eco "läve" mõistet seoses Ch. S. Peirce'i vaadetega semioosisele ja semiootikale. Kui strukturalistlikust traditsioonist lähtuv Eco kuulutab semioosise põhikriteeriumiks märkide konventsionaalsuse, siis Peirce'i semioosise mõiste on tunduvalt laiahaardelisem: see ei haara mitte ainult kultuurifenomene, vaid sisaldab ka mitmeid loodusprotsesse. Eco tuleb järeldusele, et bioloogilisi protsesse (nt immunsüsteemis toimivaid) ei saa lülitada semiootilise uurimuse programmi. Samal ajal on Peirce'i tunduvalt laiem semioosisemääratlus aluseks semiootilistele käsitlustele bioloogias ja meditsiinis ning sealtnaudu ka biosemiootikas ja meditsiinisemiootikas.

Language as a “mirror of nature”

Jaakko Hintikka

Dept. of Philosophy, Boston University,
745 Commonwealth Ave, Boston, MA 02215, USA
e-mail: hintikka@bu.edu

Abstract. How does language represent (“mirror”) the world it can be used to talk about? Or does it? A negative answer is maintained by one of the main traditions in language theory that includes Frege, Wittgenstein, Heidegger, Quine and Rorty. A test case is offered by the question whether the critical “mirroring” relations, especially the notion of truth, are themselves expressible in language. Tarski’s negative thesis seemed to close the issue, but dramatic recent developments have decided the issue in favour of the expressibility of truth. At the same time, the “mirroring” relations are not natural ones, but constituted by rule-governed human activities à la Wittgenstein’s language games. These relations are nevertheless objective, because they depend only on the rules of these “games”, not on the idiosyncrasies of the players. It also turns out that the “truth games” for a language are the same as the language games that give it its meaning in the first place. Thus truth and meaning are intrinsically intertwined.

In this day and age, the different main approaches to language — semiotic, linguistic, logical, and psychological — have unfortunately little to do with each other. It is therefore in order, it seems to me, to take this opportunity to report to you some interesting recent and on-going developments in logical theory, philosophy of language, and formal semantics in the hope that they might illuminate the issues dealt with in the other approaches. As a focal point I have chosen the idea of language as “a mirror of nature” in spite of the fact — or because of it — that this slogan is ambiguous. It is easy to see what a theory would be like that maintained that language is a mirror of the

world. Wittgenstein's so-called picture theory is probably the most fully worked-out example of such a view. But it is far less clear what is meant — or even what can be meant — by the fashionable denials of the view that language somehow corresponds to or "mirrors" nature. Without claiming exhaustiveness, one can perhaps distinguish the following three interrelated ingredients of this syndrome of ideas.

(1) The essence of language is not representation, but interpersonal communication, having such different forms as commanding, inquiring, promising, gossiping, praying, etc. All these have played a role in philosophers' and other scholars' theories. Wittgenstein had a much longer list of different uses of language, and his first example of a language-game was a sequence of commands. For L. E. J. Brouwer the main function of language was "Willensübertragung". I can very well understand the temptation to think that questions and answers, rather than statements, are the basic mode of language use. Indeed, I have tried to epitomise my interrogative theory of knowledge-seeking in the slogan "inquiry as inquiry". Some scholars have seen in gossiping the context of the genesis of human language, and Aristotle already mentioned prayers as an example of utterances that are neither true nor false.

(2) A closely related thesis claims that language is an essentially social phenomenon, that it is conceptually impossible to think of a language without a language community. A widespread interpretation attributes such a view to Ludwig Wittgenstein. According to such an allegedly Wittgensteinian view language is a role-governed human activity whose rules can be created and enforced only by a language community.

(3) A much deeper philosophical view holds that it is in principle impossible to speak consistently of the semantic relationships between language and reality. As test case of such relationships is the notion of truth, that is to say, the relation of a true sentence to the fact that makes it true. This relation is presumably what is meant by the notion of mirroring in the title of this essay.

Admittedly, we can define the notion of truth, as Tarski showed in his classical monograph of 1935, for explicitly formulated logical languages. But, as Tarski is supposed also have shown, this can happen only by means of a richer metalanguage. Now there does not exist any richer metalanguage over and above our actual working language,

Tarski's "colloquial language". Hence the general unrestricted notion of truth cannot be used in an colloquial language without running into contradictions. As I once put it, for a serious theorist of our actual working language "true" is a four-letter word to be avoided in polite philosophical discourse. And if so, all talk about our actual language mirroring actual reality must in the last (non-Freudean) analysis be little better than nonsense. The only alternative would be to postulate an altogether different hermeneutical technique of approaching the fundamental language-world relations. It is no accident that for Heidegger truth is not correspondence but "Erschlossenheit".

The news I have to report to you is that all these three ways of rejecting the idea of correspondence between language and the world are either demonstrably wrong or without the support they are generally thought to have. I will first deal with the first two. Within the scope of a single essay, I cannot deal adequately with all the systematical issues involved; therefore I will approach them *ad hoc*, or rather in terms of an *experimentum crucis*. This experiment is offered to us by the philosophy of language of Ludwig Wittgenstein, who is generally thought of as the main representative of the views (1) and (2). I will begin with the second. Speaking historically, not all commentators have accepted the interpretation according to which for Wittgenstein language is an intrinsically (conceptually) social phenomenon. There used to be controversies as to whether an isolated human being not living in any language community could be said to have a language. As if to illustrate this very problem, Daniel Defoe has constructed for us the scenario of Robinson Crusoe on his desert island before the arrival of Friday. The defenders of the orthodox interpretation of Wittgenstein must maintain that in a strict philosophical sense Robinson Crusoe could not have a language.

Now this interpretational question has been answered by no lesser of a commentator than Ludwig Wittgenstein himself. In his unpublished writings he repeatedly discusses the question whether an isolated individual outside all language communities could have a language. Wittgenstein even uses the very same example of Robinson Crusoe. And his point is completely unequivocal. Yes, according to him Robinson Crusoe could have a language, provided that he behaves *vis-à-vis* his own utterances in a certain rule-governed way, so that a hidden observer could, for instance, use his monological statements to predict his behaviour. No language community is needed to

enforce those rules. In this sense, for Wittgenstein language is not an intrinsically social phenomenon.

This is an interesting result. The sociolinguistic speculations of people like David Bloor and Peter Winch may or may be argued for, as far as this essay goes, but they have nothing to do with Wittgenstein's ideas. Their defenders' attempts to hang on Wittgenstein's coat-tails are therefore little short of ridiculous.

But if this was Wittgenstein's view, why did he not say so in his main work, the *Philosophical Investigations*? Well, he does say so, but without using the example of Robinson Crusoe. This is because he had meanwhile become interested in the processes of a language acquisition as providing especially important clues to its semantics. And from this point of view, Defoe's story is no longer an apt illustration, for Crusoe had learned his language before landing on his island. Unfortunately, Wittgenstein did not come up with a better parable to illustrate his updated view. But this does not mean that Wittgenstein changed his views on the social — or, rather, public — character of language in the least.

But didn't Wittgenstein argue in so many words against the possibility of a private language? Yes, but what did he mean by "private"? This word has two uses, and figures in two different contrasts. The private-public contrast can be roughly equivalent to the internal-external contrast, that is, to the contrast between what is accessible only to oneself and what is accessible to others. This is the sense in which Wittgenstein denied the possibility of a private language. Robinson Crusoe's language behaviour must in principle be observable by others.

But "private language" can also mean a monological language, that is, a language that is not shared by a community of speakers. In this sense, Wittgenstein saw no conceptual impossibility in a private language. One of Wittgenstein's main reasons for the public character of language in the first sense was the need of language-games to mediate language-world connections. But there are games that one can play alone, as Wittgenstein himself sometimes reminds us.

But doesn't Wittgenstein's emphasis on language-games — and the variety of different language-games — betray a belief in the social character of language or at least betray his rejection of his own earlier view of language as a mirror of the world? An acute answer was provided long ago by the acute Finnish philosopher Erik Stenius who correctly pointed out that there is no conflict between the idea of lan-

guage as a picture and the idea of a variety of uses of language. We can play games with pictures. I can give you a picture as a move in several different language-games of the kind Wittgenstein envisaged. I can give it to you to tell what the world is like, but alternatively I can give it to you as a command to make sure that the world is as it is depicted by the pictures, or as a question whether the world is like it is in the picture, and so on. The real novelty of Wittgenstein's later position — to speak now in my own voice — is that according to him the very pictorial relationships are now created and maintained by those human activities that Wittgenstein called language-games. It is not just that we can play different games with the sentences of our language; the very descriptive meaning that enables us to do so is already constituted by certain language-games.

I believe that this idea of Wittgenstein's is not only a correct one but enormously fertile, and I have for a long time put my pen where my mouth is. For the idea of language as a mirror of nature, it implies so to speak both good news and bad news. It implies that we can speak of a correspondence between language and reality. But it also implies that possibility is not grounded on a structure shared by our sentences with the corresponding facts. There is no correspondence between language and the world grounded on the respective internal character of language and reality in their own right. As Wittgenstein once put it, the correspondence between language and reality, as everything metaphysical, lies in the use by language, that is, as I read Wittgenstein, in the language-games that constitute the semantical links between language and reality.

But this leads us straight to the third problem listed in the beginning of this essay. Can we really speak of the correspondence between our own language and reality in this same language — in the only language I understand, as Wittgenstein put it in the *Tractatus*? Is the semantics of our language expressible in that language? A crucial experiment is offered to us by the notion of truth. Is this concept ineffable after all? The list of philosophers who have maintained the ineffability of truth in our actual working language looks like the beginning of a veritable who's who in the philosophy of language: Frege, Russell, Wittgenstein, Tarski, and Quine, plus a large number of minor prophets. It is therefore — but not only for this contingent reason — of great interest to report to you that the outlook has dramatically changed in the last few years. The idea of truth, especially the idea of truth as correspondence, and even the idea of logic, has been put to a new light.

There seems to be a fairly general agreement among philosophers that the basic part of contemporary logic known variously as quantification theory, predicate calculus or first-order logic is paradigm case of logic. For many philosophers and linguists, it is *the* logic. Once I expressed to a senior philosopher of language some doubts of the adequacy of first-order logic as the true *Sprachlogik*, that is, as the logic of our actual language. He stared at me with an expression of horror — mock horror, I hope — and said, "Nothing is sacred in philosophy any longer!" Yet there is a simple but profound reason why the received logic of quantification is, not wrong, but incomplete in the sense that it accomplishes only a part of its job description. To put it in personal terms, there is no point for you to buy (or to publish) any textbooks of logic until this fact is realised and corrected. The old ones do not tell you what our real basic logic is like.

In order to see this, imagine that your name is Dr. Zamenhoff and that you have been assigned by UNESCO the task of constructing a universal logical language for science and everyday life. What does such a language have to accomplish? Whatever else there is to be demanded of it, one thing is clear. In such a language, we must be able to express any possible pattern of dependence and independence between different variables. For of course we cannot *a priori* know that any such pattern is not exemplified in nature, society, mathematics or human thought. Without being able to represent all possible patterns of dependence and independence between variables we cannot claim that our logical language is a universal mirror of nature.

But how are dependence and independence between variables expressed between in a usual logical language? By the dependence or independence of the quantifiers on each other to which they are bound. And we are all told in introductory logic courses how these dependencies are indicated. They are indicated by the most important logical symbols, the brackets or parentheses (*,*). Such pairs of parentheses following a quantifier are said to indicate its scope. A quantifier depends on another one if and only if the former lies in the scope of the latter. But in the received Frege-Russell logic scopes are always nested. As a consequence, pairs of brackets can only express transitive and asymmetrical relations. For instance, branching or symmetrical quantifier structures cannot all be represented by their means. Hence many possible patterns of dependence and independence among quantifiers are impossible to express in a received logical language.

For this reason the traditional Frege-Russell logic is inadequate as our general unrestricted basic logic.

This flaw is easy to correct. In principle, we could do so merely by liberalising the use of parentheses. A more convenient notation is obtained by introducing a new notation which as it were *ad hoc* exempts a quantifier from its dependence on another in whose (syntactical) scope it occurs. The result is a richer first-order logic which I have called independence-friendly (IF) first-order logic. This name has turned out to be a mistake, however. For one thing, I should not have been given it any particular epithet. For IF first-order logic is our unrestricted basic logic. It simply is *the* first-order logic. Instead, the traditional first-order logic ought to be renamed as dependence-handicapped first-order logic or, to be politically correct, independence-challenged logic. For another thing, it is not only possible to express more independencies between quantifiers in the new language than can be expressed in traditional first-order languages: it is also possible to express kinds of dependence that could not be expressed before. Hence the new logic might be called dependence-friendly logic as appropriately (or inappropriately) as independence-friendly one.

Under any name, the new logic is already promising new insights into several important subjects, including foundations of set theory, compositionality, parallel processing, and quantum logic. It represents an important breakthrough not only in logic, but in language theory and the logic of science. For the purposes of this essay, it is important for a reason which comes up when you try to define a truth predicate for a language in the very same language. For the purpose of doing so, one must be able to discuss the syntax (i.e. the purely formal aspects) of the language in question in the same language. Here an arithmetical language can serve as a clear-cut example. In such a language, this syntactical self-reference takes the form of Gödel numbering: One codes the expressions of this numerical language into suitable numbers. The result is a situation that can be compared with an amateur play. One can speak of the actors — and they can speak of each other — in two different roles, either as their everyday selves with their everyday names, families, careers and nationalities, or else as characters in a play with certain relationships to the other characters in the play and to the rest of the imaginary world of the play. In the same way, in a self-applied first-order arithmetical language one can speak of numbers as numbers, so to speak in their civilian role, but one can

speak of them also as codifications of formulas. Neither in the case of actors nor in the case of numbers is there anything paradoxical in such double-entendre situation. Moreover, characters in a play can speak of denizens of the real world, including their own selves outside the play. (I once saw a movie about an imaginary tennis champion in which John McEnroe and Pancho Gonzales played themselves and discussed events in their actual life outside the movie.) Likewise — I almost said by the same token — a number which plays the role of an arithmetical sentence can say something about itself, for instance that it is unprovable.

However, one thing is clear: When you quantify over numbers in their two different roles, the quantifiers must be independent of each other. For otherwise we would make the same mistake as a small child might commit in thinking that there are dependencies between what happens in a play and what happens in real life.

But it turns out that these independencies are among those that cannot be expressed in the received first-order logic. Hence Tarski's undefinability result holds only because he has chosen as his basic language one which is based on the old received first-order logic. Or perhaps I can say that Tarski's impossibility theorem holds only because of certain subtle but important flaws in the logic of Frege and Russell that he was using. Accordingly, the general philosophical interest of Tarski's theorem is very small.

Indeed, when the received first-order logic is replaced by IF one, a truth-predicate automatically becomes definable. Contrary to a widespread opinion, the undefinability of truth in received first-order languages is not due to their being too strong, but to their being too weak in their expression power in that all possible patterns of dependence and independence between quantifiers cannot be expressed in them.

Even though these explicit results can be proved in the first place only for formal (but interpreted) first-order languages, there does not seem to be any doubt that they can be extended to suitable fragments of ordinary ("colloquial") language. As I once put it, in this way we can finally exorcise "Tarski's Curse" from our semantics.

What all this means for the theme of my paper should be clear. The gist of the mirroring relation mentioned there is the relation of a sentence to the fact that makes it true. And their relation is normally expressible in sufficiently strong languages without any hidden contradiction or paradox. Truth is not ineffable; "true" is no longer a four-letter word in language theory. Language can mirror the world. One

can even argue that this mirroring possibly comes as it were free of charge. What I mean is this: The language-games which give a certain language its meaning is all we need for the purpose of defining a truth predicate for that language. Hence there is no folly in defining truth, as Davidson has claimed. The real folly is not to define it because the truth predicate comes to us *gratis*. This constitutes in fact a similarity between the IF truth predicates and the minimalist approaches to truth, even though the latter approaches have never been developed far enough to yield an explicit truth conditions.

At the same time, in speaking of a correspondence between language and the world we must heed the same warning as was registered earlier in this essay in connection with Wittgenstein's ideas. The kind of correspondence my truth predicate establishes between a sentence and a fact does not amount to any easily characterisable parallelism between the ingredients of a true sentence and the ingredients of the world that it is about. The definition of truth that IF logic naturally yields is truth of a sentence with the existence of a winning strategy for one of the players, the verifier, in certain games of verification and falsification. Even though in such games, called semantical games, each move is correlated with a logical constant in the sentence *S* under examination, there is no simple correlation between the logical constants of *S* and features (or its ingredients in general) of reality. The same constituent expression, e.g., a quantifier, can prompt several applications of a rule, and some of the expressions that must be used in a play of the game may not be subformulas of the initial sentences of the play. In this sense, the structure of language does not in any simple way mirror the structure of the world. And even to the extent that it does, the correlation between the two is not constituted by the intrinsic properties of either party, but by the human activities that I would call language-games if my first name were Ludwig. It is thus a matter of intellectual taste whether my treatment of truth should be labelled a correspondence theory of truth or not.

These results apply in the first place to language whose logical structure is made explicit. However, the same approach can be used in the study of the semantics of natural languages. Indeed, in my earlier work, I showed that in this way one can among other things obtain a much better theory of anaphora in natural languages than the better known competing ones. Moreover, the ideas and results I have reported have a great deal of relevance to semiotics. For instance, the semioticians who trace the ancestry of their ideas to Peirce might be

intrigued to know that the game-theoretical interpretation of quantifiers that can be considered as a microcosm of the ideas expounded here was put forward explicitly and vigorously by Charles Sanders Peirce. Thus the interest of the issues and insights reviewed here extends way beyond any one approach to language and hopefully can serve as a means of integrating them.

References¹

- Hilpinen, Risto 1983. On C. S. Peirce's theory of the proposition. In: Freeman, Eugene (ed.), *The Relevance of Charles Peirce*. La Salle (Illinois): The Hegeler Institute, 264–270.
- Hintikka, Jaakko 1996a. *Ludwig Wittgenstein: Half Truths and One-and-a-Half Truths*. Dordrecht: Kluwer Academic.
- 1996b. *The Principles of Mathematics Revisited*. Cambridge: Cambridge University Press.
- 1998. *Language, Truth and Logic in Mathematics*. Dordrecht: Kluwer Academic.
- & Kulas, Jack 1985. *Anaphora and Definite Descriptions: Two Applications of Game Theoretical Semantics*. Dordrecht: D. Reidel.
- & Sandu, Gabriel 1993. *On the Methodology of Linguistics*. Oxford: Basil Blackwell.
- & Sandu, Gabriel 1997. Game-theoretical semantics. In: Benthem J. van, Meulen A. ter, (eds.), *Handbook of Logic and Language*. Amsterdam: Elsevier, 361–410.
- Hintikka, Merrill B.; Hintikka, Jaakko 1986. *Investigating Wittgenstein*. Oxford: Basil Blackwell.

Язык как “зеркало природы”

Как язык, который может использоваться для говорения о мире, репрезентирует (“отражает”) этот мир? И отражает ли? Одна из основных традиций в теории языка, включающая Фреге, Витгенштейна, Хайдеггера, Куайна и Рорти, отвечает на этот вопрос отрицательно.

¹ The interpretation of Wittgenstein relied on here is expounded and documented in Hintikka & Hintikka 1986, Hintikka 1996a. The new logic and some of its applications are explained in Hintikka 1996b, 1998, Hintikka & Sandu 1997. Applications of related ideas to linguistics are found in Hintikka & Kulas 1985, Hintikka & Sandu 1993. C. S. Peirce's anticipation of game-theoretical semantics is explained in Hilpinen 1983.

Пробным является вопрос о возможности выражения в языке критических “отражающих” отношений, особенно понятия истины. Казалось, что негативный тезис Тарского закрыл проблему, но недавние примечательные исследования разрешили ее в пользу выражаемости истины. В то же время “отражающие” отношения не являются естественными, но формируются управляемой правилами человеческой деятельностью наподобие языковых игр Витгенштейна. Эти отношения, тем не менее, объективны, так как они зависят только от правил этих “игр”, но не от идиосинкразии игроков. Оказывается, что для языка “истинностные игры” то же самое, что языковые игры, которые придают ему значение. Таким образом, значение и истина внутренне сплетены.

Keel kui “looduse peegel”

Kuidas keel, mida võib kasutada rääkimiseks maailmast, representeerib (“peegeldab”) seda maailma? Ja kas üldse peegeldab? Üks peamisi keeleteooria traditsioone (mille esindajateks on Frege, Wittgenstein, Heidegger, Quine ja Rorty), vastab sellele eitavalt. Proovikiviks on siin küsimus võimalusest väljendada keeles kriitilisi “peegeldavaid” suhteid, eriti tõe mõistet. Tundus, et Tarski negatiivne tees sulges probleemi, kuid hiljutised tähelepanuväärsed uurimused lahendasid selle tõe väljendumislikkuse kasuks. Samal ajal need “peegelduvad” suhted ei ole loomulikud, vaid kujunevad inimtegevuse reeglite läbi, sarnaselt Wittgensteini keelemängudele. Sellest hoolimata on need seosed objektiivsed, kuna nad sõltuvad ainult nende “mängude” reeglitest, aga mitte mängijate idiosünkraasiast. Selgub, et keele jaoks on “tõemängud” sama, mis tähendust omistavad keelemängud. Seega on tähendus ja tõe omavahel seesmiselt põimunud.

Mereology and semiotics

Frederik Stjernfelt

Dept. of Comparative Literature, University of Copenhagen,
Njalsgade 80A, 2300 Copenhagen, Denmark
e-mail: stjern@hum.ku.dk

Abstract. This paper gives a first overview over the role of mereology — the theory of parts and wholes — in semiotics. The mereology of four major semioticians — Husserl, Jakobson, Hjelmlev, and Peirce is presented briefly and its role in the overall architecture of each of their theories is outlined — with Brentano tradition as reference. Finally, an evaluation of the strength and weaknesses of the four is undertaken, and some guidelines for further research is proposed.

Strange as it may seem, mereology — the theory of parts and wholes¹ — has only rarely caught the explicit attention of semiotics.

¹ “Mereology”, from Greek *meros*, part. As a matter of fact, it might have been called “merology”, but after the Polish logician Lesniewski the form quoted has become ubiquitous. Lesniewski, in his works from the 20s and 30s, considered mereology to be one out of three basic branches of philosophy, “protothetic”, “ontology”, and “mereology”, respectively. Protothetic is a doctrine of propositions and their interrelations and it forms the logical basis of his theory; ontology is based on a distributive rendering of class membership, so that distributive class expressions are identical with general nouns applicable to individuals. Mereology, then, considers collective class expressions understood as being composed of parts. By the distinguishing of the two latter branches of philosophy, Russell’s paradox is avoided: there is no such thing as a class containing itself. Mereology is weaker than set theory in so far as it only admits one relation of inclusion (part of), opposed to the two in set theory (membership relation and subset relation, which in Lesniewski’s thought is separated as belonging to ontology and mereology, respectively). Mereology in this sense of the word thus has the advantage of being “bottomless”, the compositional foundation of a class upon the existence of ultimate members being avoided. This implies that mereology is “phenomenological” in so far as it may describe a given level of phenomenal existence without recourse to a bottom level of atomistic ontology, a crucial aspect of the semi-

Semiotics as a study taking significant phenomena in general as its object, is faced with the problem of the signification of wholes in relation to the signification of its parts as a completely everyday phenomenon, and the recognition of distinct levels or layers of signification is also a well-known idea in most parts of semiotics. Taking the prototypical case of a text as an example, semiotics is faced not only with the traditional linguistic question of the organization of phonemes and morphemes into words, and in turn, words into sentences by means of syntax, but also, in turn, the successive integration of sentences into more extensive wholes of transphrastic discourse, periods, scenes, scripts, narrations, genres, systems of ideas, etc. As is the case in the sciences more generally, this mereological problem gives rise to two typical approaches; the one, reductionist, takes a compositional attitude to the signification of wholes which is consequently seen as some kind of sum of its elements, so that an algorithmic syntax of some sort is supposed to make it possible to derive the whole's signification from the knowledge of the signification of its parts. The second, holist, stance takes the signification of the higher levels as irreducible, relying on their own phenomenological motivation, and, correlatively, the parts as being an analytical result of a partitioning of the whole, expanding the possibilities of the whole and making its signification in the single case more precise.²

otic perspectives in mereology. This implies the possible affinity of mereology to strongly nominalist positions claiming mereology to be without any ontological presuppositions whatsoever (as in Lesniewski's case, and after him, Goodman) — even if this is no necessity, and mereology may as well be connected to realist positions, for an actual example: Barry Smith. Lesniewski was influenced by the part-whole reflections of the Brentanian tradition: Husserl's 3rd and 4th *Logical Investigations*, in turn influenced by Brentano's *Deskriptive Psychologie* (1890), and Carl Stumpf's *Über den psychologischen Ursprung der Raumvorstellung* (1873). For further accounts for these developments, see Smith (1982, 1994). In this essay, we shall stick to mereological aspects of decidedly semiotic currents of thought.

Even if none of the four authors discussed here use the word, I have chosen it as a shorthand for "doctrine of whole and parts" and similar more complicated expressions.

² Of course, each of these two alternatives displays a host of subvariants of more and less sophisticated types, ranging from a completely compositional logicist theory in the one end and to almost mystical insinuations on the wholes' autonomy in the other. Moreover, there is not necessarily a contradiction between the two; it is perfectly possible to imagine compromises, so as, e.g., an emphasis on the primacy of the holist level giving rise to motivated, iconic syntaxes governing its parts — combined with a recognition of the possibility for these syntaxes of assuming, once established, an autonomous status involving local compositionality.

In this paper I shall briefly discuss the mereological implications in four major trends of semiotics with different degrees of connection to the Brentanian tradition in philosophy from which modern mereology originate, namely Husserl, Jakobson, Hjelmslev, and Peirce. Husserl, of course, is a Brentanian, and in his famous 3rd Logical Investigation, he outlines a theory of parts and wholes as a part of formal ontology. The second, Jakobson, has direct connections to this tradition, primarily via Husserl; the third, Hjelmslev, displays striking similarities with the tradition without any direct influence admitted; the fourth, Peirce, working simultaneously with Brentano, has no relation at all to the tradition but still structural similarities abound.

Husserl

It is strange how little Husserl's work is recognized or even known in the semiotic world. In fact, most of his work either explicitly deals with or at least touches upon issues central to semiotics. In his early work, around the period of the *Philosophie der Arithmetik*, he even uses the word himself³, and later, in his chef-d'oeuvre *Logische Untersuchungen* (1900–1901), he investigates a whole series of central semiotic questions. *Logische Untersuchungen* ought to count as a classic of semiotics. Its long *Prolegomena* contains a detailed attack on psychologism in logic and semiotics — in so far it constitutes a major contribution to the fundamental anti-psychologism of general semiotics alongside Peirce's strongly related position. The first investigation draws a distinction between two sign types, *Ausdrücke* and *Anzeichen*, respectively: signs conferring meaning to an object vs. signs merely indicating an object. The second investigation is a critique of empiristic abstraction theories attempting to make induction the source of abstract knowledge — and it points instead to a phenomenological change in conception modus as responsible for abstraction's grasp of ideal objects. The third investigation, to which we shall return below, constructs the foundations for a formal ontology of wholes and parts which form a basis for all phenomenological and semiotic investigations in so far as it makes possible to distinguish proper parts from non-proper parts, the last including what is usually called properties. The fourth investigation takes the mereology of the third as the foun-

³ Cf. Husserliana XII which contains among other writings "Zur Logik der Zeichen (Semiotik)".

dation of a pure, that is, a priori grammar, mapping dependence relations between linguistic entities; nouns and sentences are taken as independent primitives which other linguistic entities are dependent upon. The fifth investigation is the first sketch of Husserl's intention theory, distinguishing between the quality, the matter, the representative content, and the object of an act, respectively. The quality is in our days' terms a speech act category; it refers to the act's character of being propositional, imperative, wishing, etc. The matter of the act is the way its object is presented in the act, and the representative content, finally, is the degree of fulfilment with which the object is presented (perception representing the highest degree of fulfilment, and linguistic representations ("signitive acts") and imaginations ("imaginative acts") like fantasies, pictures, dreams, memories, etc. being act types with lower degree of fulfilment). All these aspects of the act are presented as moments, that is, "unechte Teile", in the terminology of the third investigation⁴. Finally, the sixth investigation takes up epistemology on the basis outlined in the former investigations; here, the central problem of categorial intuition (how categories, among them linguistic categories, possess their own type of intuitive fulfilment⁵) is discussed.

As is evident, most of the issues discussed in the *Logische Untersuchungen* lie at the heart of semiotics, and the mereology of the third investigation forms a crucial piece of formal ontology for the description of all these subjects. The main idea is that all objects may be described in terms of parts and wholes, and that two types of parts may be distinguished. Proper parts and non-proper parts, or, parts versus moments, respectively. Parts — "echte Teile", or "Stücke", or concrete parts — are parts which may be separated from the whole they constitute, while moments — "unechte Teile", or aspects, or abstract parts — are parts which may not be so separated. This sparse definition may be extended to relative autonomy and dependence, respectively, so that one object is relatively dependent on another if that content may only exist in connection to the other or parts of it. This idea makes possible the crucial structure of three possible dependence relations between parts:

⁴ As a matter of fact, the question of whether the object is a genuine part or a moment of the act is crucial to the division between realist from transcendental ontology.

⁵ I discuss the categorial intuition concept and its extension in Stjernfelt (forthcoming a).

“Fassen wir irgendein Paar von Teilen eines Ganzen ins Auge, so bestehen folgenden Möglichkeiten:

1. Zwischen beiden Teilen besteht ein Verhältnis der Fundierung.
2. es besteht diese Verhältnis nicht. Im ersteren Falle kann die Fundierung
 - a) eine gegenseitige,
 - b) eine **einseitige** sein ...” (Husserl 1984: 264–265).

Husserl’s mereological investigations includes further points of interest — so as for instance the difference between wholes requiring a moment of unity and wholes not requiring it. Smith (1994: 236) summarizes Husserl’s ideas in a small taxonomy. Between wholes, Husserl distinguishes those which do not require additional objects to exist (such as nut and bolt), opposed to those that require additional unifying objects (such as nails or glue). The last category yields two subtypes, depending on whether the unifying object is a concrete part or an abstract moment. In the latter case, he moment of unity will correspond to von Ehrenfels’s *Gestaltqualitäten*.

This distinction is related to different versions of gestalt theory, cf. Barry Smith’s recapitulation of the Austrian gestalt school’s “production theory” requiring such a moment of unity in addition to the parts, as opposed to the Berlin gestalt school’s claim that no parts of a gestalt are genuine and all parts are moments only accessible by abstraction. (Smith 1994: ch. 8). Both schools’ theories have their advantages and flip sides. The Graz school has the advantage of distinguishing between a part and the role played by that part in the gestalt in question, while the Berlin school tends to blur this distinction and construct a holism. The Graz school, on the other hand, tends to come close to Helmholtz’s old idea of gestalt-like phenomena being the result of “unbewusste Schlüsse” so as to make them an additional feature added to sense data by the intellect — while on the other hand the Berlin school does not follow this subjectivist idea: its holism has the merit of integrating both subjective and objective determinants as responsible for the gestalt, and so the Berlin school will find gestalts not only in the physiology of the gestalting subject, but also in the purely objective, even physical surroundings. Smith’s conclusion is not unanimous, but it seems as if the two schools correspond to different gestalt possibilities on a continuous scale rather than being mutually exclusive, so that both very subjective and very objective gestalts as well as a large range of intermediate types are possible. We can not go further into this huge discussion here, but a further clarification of

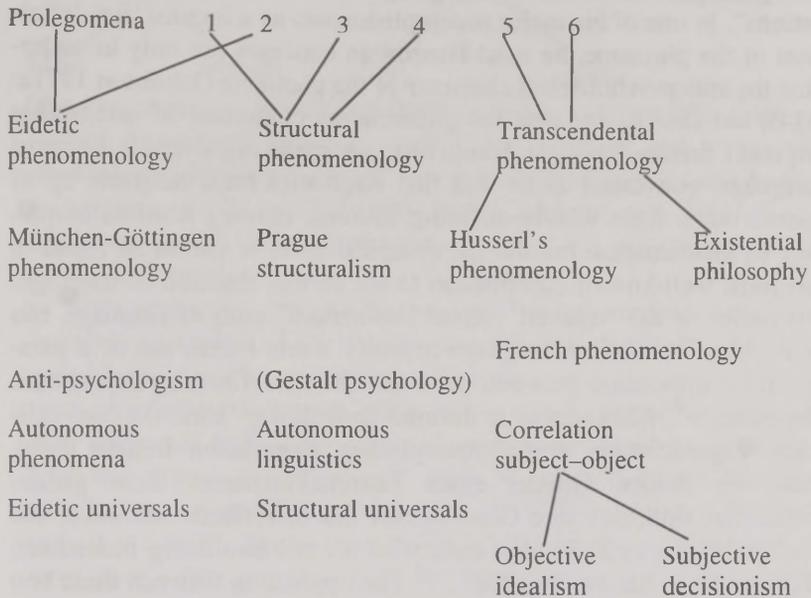
types and subtypes of gestalts and their relation to their parts will no doubt enrich the semiotic discussion of mereology.

Finally, Husserl's fourth Investigation should be added. Here, he outlines a pure, a priori grammar using the mereological tools of the third Investigation — an idea, as a matter of fact, closely related to Hjeltslev's idea (cf. below). In contradistinction to Hjeltslev's empirical idea of using mereology as a descriptive metalanguage for linguistics, Husserl's idea is to base the mereological description of language on certain ontological presuppositions, namely the privileging of the noun and sentence, respectively, as independent entities (after the Scholastic distinction between *kategorematica* and *synkategorematica*, respectively, the former possess an autonomous signification). Furthermore, Husserl defines the important distinction between *Widersinn* and *Unsinn*, respectively — logical and grammatical nonsense, respectively, where the latter depends on irreconcilable syncategorematica being combined, while the former is grammatical correct while contradictory. Husserl's sketches of a pure grammar received more interest in logic than in linguistics: they became very important for Ajdukiewicz, Lesniewski, and the development of categorial grammar. But even so, a volume like the brilliant *Rational Grammar* by Jean-Louis Gardies not only outlines the *Wirkungsgeschichte* of the fourth Investigation, it also gives a detailed account of its possible implementation in linguistics.

Jakobson

The fact that Jakobson's version of structural linguistics involves strong influences from Husserl's *Logische Untersuchungen* is clearly stated at several occasions in Jakobson's oeuvre, but it has only received general recognition after the work of Elmar Holenstein who, in a period of relative phenomenological oblivion during the sixties-seventies, never ceased to underline the crucial lines of connection between structuralism and phenomenology (Holenstein 1975, 1976). He even traced three or four variants of phenomenology taking each their characteristic departure in the *Logische Untersuchungen*, as follows (after Holenstein 1976: 58⁶):

⁶ The schema is, of course, schematic, and lots of influences cross the main lines indicated. Thus, it is well known that Heidegger was hugely influenced by the 3rd in-



In this respect, the first, third, and fourth Investigations, on the sign, mereology, and pure grammar, respectively, become founding texts for structural semiotics with their emphasis on the possibility of unfolding a set of a priori foundations for the study of semiotic phenomena.

As early as a very young member of the Moscow Linguistic Circle, Jakobson was acquainted with the *Logische Untersuchungen* through the Russian Husserl disciple Gustav Spet (Jakobson 1985: 281); the Prague Circle which he joined in the twenties was influenced by Husserl through its founder Vilém Mathesius (Jakobson 1971b: 713), and to the end of his life, Jakobson did not cease to emphasize the central role of Husserl in the development of semiotics (Jakobson 1985: 203) and structural linguistics⁷. As a main figure in the Prague Structuralism, Jakobson placed a great emphasis on the 3rd and 4th *Logische Untersuchungen* especially, and several times he underlined his view of linguistics as a science investigating a hierarchy of wholes

vestigation, just like the 6th investigation's discussion of categorial intuition is important for both eidetic and structural phenomenology.

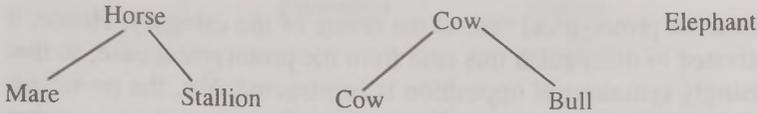
⁷ Jakobson (1985: 189). Here, he claims that the 3rd Logical Investigation is "... one of the milestones for the initial advance of structural linguistics ...".

and parts⁸, and he envisioned language as a whole as a “pattern of relations”. In one of his major accomplishments as a linguist, the definition of the phoneme, he used Husserlian concepts not only to underline the anti-psychological character of the phoneme (Jakobson 1971a: 314), but also to describe the phoneme as composed of inseparable aspects (‘feature bundle’). Jakobson never made one over-all theory of language, convinced as he was that linguistics must be made up of pieces taken from widely differing sources, ranging from anthropology to mathematics, but the mereological issue is also to be found in his most well-known contribution to the formal research of language, his notion of the “marked” versus “unmarked” units of language. His main idea here is that language at many levels makes use of a paradigmatic opposition between parts which are defined by asymmetric dependence⁹. Markedness is defined as follows: “Eine der wesentlichen Eigenschaften der phonologischen Korrelation besteht darin, dass die beiden Glieder eines Korrelationspaares nicht gleichberechtigt sind: das eine Glied besitzt das betreffende Merkmal, das andere besitzt es nicht; das erste wird als *merkmalhaltig* bezeichnet, das zweite — als *merkmallos* ...”¹⁰ The opposition between these two is contradictory, in so far the unmarked term does not imply the absence of the feature implied by the marked term, it only implies the absence of any reference to that feature, be it positive or negative. Later, a correlated idea is presented in the theory of *zero-signs*, referring to the “opposition de quelque chose avec rien”, with a Saussure quote (Jakobson 1971b: 213). The marked term is dependent on the unmarked, not vice versa. This asymmetry implies, furthermore, that the unmarked term by *Vertauschung* may play the role as the more general term of which the marked term forms a part. A semantic example will serve:

⁸ Like in “Parts and Wholes in Language” where he begins: “In the second part of Edmund Husserl’s *Logische Untersuchungen* — still one of the most inspiring contributions to the phenomenology of language — two studies devoted to “Wholes and Parts” introduce the philosopher’s meditations on “the Idea of Pure Grammar”. In spite of manifold aspects of interdependence between wholes and parts in language, linguists have been prone to disregard this mutual relationship” (Jakobson 1971b: 280), and further, “The structure of the verbal code is perhaps the most striking and intricate example of whole-part relations that are built hierarchically” (Jakobson 1971b: 282–283).

⁹ It is a strange fact that Jakobson not explicitly refers to the *Logische Untersuchungen* in his definitions of the zero-sign or the markedness/unmarkedness distinction. Holenstein (1975, 1976) does not mention any such direct influence either.

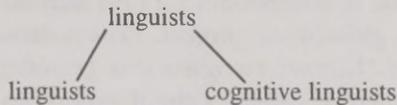
¹⁰ Jakobson (1971b: 3), with reference to Prince N. Troubetzkoy.



The two extremes, horses and elephant, symmetry prevails; there is a mutual dependence between “mare” and “stallion” and a one-sided dependence of both on “horse”, so here markedness is used to erect co-ordinate subclasses of a class. In the elephant case, English does not admit special terms for the sexes (except for a duplication of the cow-bull distinction).

With respect to cows, however, “bull” is the marked term, while “cow” is unmarked. This implies two different meanings of “cow”, general and specific, respectively. This is to say that in neutral contexts, the unmarked term is used; when you for instance see a field with cows and bulls on it, you can indicate them all by pointing to them and stating: “See the cows”, while if one of your children points to a bull and adds: “See the big cow”, you will answer: “That’s no cow, it is a bull”. So the term “bull” is unilaterally dependent on the term “cow”. The unmarked term, so Jakobson, has a zero-meaning (in this case, with respect to gender) in contrast to the marked term, but it is characteristic that the semantics of the unmarked term now oscillates between referring to the marked feature being absent on the one hand or referring to the absence of any marked feature on the other. (Cf. the specific and the general use of the word). “Cow” consequently oscillates between entertaining a one-sided and a mutual dependence with “bull”. This feature is, of course, not only found at many levels in language structure, but also for pragmatic reasons in use, when you want to single out some (small) marked subset of a set:

“All linguists are stupid, except for cognitive linguists”:



In short, this distinction may be invoked when you want to express that something is part of a larger whole, but yet an atypical part.

Thus, the linguistic distinction between marked and unmarked seems to correspond to a cognitive and phenomenological relation pertaining to prototypicality. If you take as a basis a prototypical case, then the appearance of a non-typical case will possess an ambiguity: it is, on the one hand, part of the category, but, on the other hand, it dif-

fers from the prototypical case at the centre of the category. Hence, it is motivated to distinguish this case from the prototypical case, so that a seemingly symmetrical opposition is constructed. Yet, the prototypical case's categorizing power still extends to the marginal case, so that will still be subsumed under its main category. Thus, the marked category is at one and the same time in opposition to the unmarked category and constitutes a subtype of it — the core characteristic of the marked/unmarked relationship. This corresponds to the fact that in semantics, the tendency is that the case considered most normal, widespread, prototypical, stereotypical (or any other typicality measure) case is referred to by the unmarked term, while the less typical case is referred to by the marked term, the marked term's expression typically being longer and more complicated than the unmarked term¹¹. Thus, the marked/unmarked distinction finds its foundation in a phenomenological mereology.

Hjelmslev

A much more ambitious and reflective theory is Louis Hjelmslev's glossematics (partly conceived in cooperation with Hans-Jørgen Uldall). It is probably not very well known that this theory is founded almost unanimously on a mereology. In opposition to Jakobson, however, this theory's relation to the central European mereology is much less clear. Glossematics takes as its point of departure the necessity of basing the cultural sciences taken as a whole on a relation as unanimous as the concept of quantity in natural sciences. This relation is taken to be quality, measured in dependences. The dependence of one phenomenon on another is taken to be the very basis of the theory in Uldall's *Outline of Glossematics*. In his magistral and beautiful introduction to the glossematic project, *Prolegomena to a Theory of Language* (Danish *Omkring sprogteoriens grundlæggelse*, 1943), Hjelmslev takes the central object of the theory of language to be the sign, which he analyses as follows:

¹¹ Even politically correct language politics, eager to deconstruct the asymmetry inherent in the markedness-unmarkedness distinction, can not avoid this, cf. long marked forms like "African-American" vs. short unmarked forms like "American".

	expression	content
form		
substance		

(matter)

The idea, now, is that the central object of the study of language as a system are the two boxes of form. Form of expression and form of content, respectively, are the two areas which may be grasped by glossematics, and even the sign, correlating units from those two domains, does not belong to the linguistic system, but to the use only. This implies that not only the matter of expression and content, respectively, that is, phonetic matter and the phenomenological world referred to is left out of scope, but also expression and content in so far as they are substances formed by linguistic form. As the central object left, the respective systems of form of expression and form of content are now made the objects of linguistic analysis. This is pursued by beginning with the discourse as an undivided whole, and analysis now is supposed to partition this object into invariant parts, named functives, registering the internal function relationship between them. Having exhausted this description at a given level, analysis goes on to repeat the procedure as to the internal structure of the elements, and the procedure is supposed to go on until a bottom of *figurae* (simple expression and content units) is reached on each of the two domains. Thus, Hjelmslev adheres to what Langacker calls the building block metaphor. The first partitioning is supposed to give the two functives expression and content, thereafter follows (e.g.) periods, sentences, morphemes, etc.

Here, the idea of a glossematic algebra of dependences finds its place. Between two functives on a given level, three so-called functions may be discerned, defined by types of dependence. Three possible dependences may hold between two functives: dependence, interdependence, and correlation (which is the absence of dependence). Dependence occurs when one part requires another for its presence (but not vice versa), interdependence occurs when two parts mutually require each other and consequently only appears together, while con-

stellation occurs when the occurrence of two parts is free, and both, one, or none of them is equally possible. Hjelmslev now distinguishes between dependences in the domains of linguistic linearisation and system, defined by both-and relations and either-or relations, respectively, which in his vast terminological system are christened selection, solidarity, combination, and specification, complementarity, autonomy, respectively (Hjelmslev 1943: 37). We can illustrate Hjelmslev's idea with an example from the syntactic field. Selection, one-sided dependence, is at stake, for instance, in the relation between main clause and relative clause (a relative clause may not occur without a main clause, while the opposite is not the case). Solidarity, two-sided dependence, occurs for instance at the sentence level between noun phrase and verb phrase, and combination, zero dependence, is found e.g. between the two functives of a compound noun.

It is striking that Hjelmslev here as the basis for his theory of language takes three mereological types of dependences very well known in the Brentanist tradition. We find them in Brentano, for instance, and at a prominent place in the 3rd *Logische Untersuchungen* we find the identical distinction between "gegenseitige", "einseitige", and no relation, respectively (Husserl 1984: 264–265, cf. above).

There is not, however, any mention in Hjelmslev as to where he is inspired to his triad of dependencies which he merely "predicts" for purely formal reasons. While his co-founder of the Copenhagen circle and enemy Viggo Brøndal refers to Husserl, just like their common disciple Diderichsen does decades later, there is no mention of any phenomenological inspiration in the *Prolegomena*.¹² At several occasions, Diderichsen remarks upon the complete similarity between the dependence calculi of the *Prolegomena* and *Logical Investigations*, but no further explanation is given.¹³ The reasons for this is hard to guess, but three possibilities (at least) are at hand. One is, of course, that Hjelmslev simply came upon the idea of a mereological grammar

¹² The only reference to Husserl found in Hjelmslev is in the early *Principes*, but even if it refers to the 4th investigation, it is pejorative: "... la théorie étrange du philosophe HUSSERL" (Hjelmslev 1928: 40).

None of two recent comprehensive treatises on Hjelmslev mentions any possible relation to Husserl (Gregersen 1992, Rasmussen 1992).

¹³ Diderichsen returns over and over again to the fact that linguistics in general tends to focus upon "three main types of grammatical connexion", and at several occasions he mentions in that context Husserl's mereological analyses from *Logische Untersuchungen* as strikingly similar to structural linguistics (Diderichsen 1966: 107 [1947], 137 [1948], 207 [1952]) but he yields no indication as to the possible relationship between Husserl and Hjelmslev.

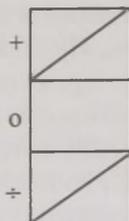
independently; another is that the absence of references is due to the very radical and autonomy-claiming linguistics he is about to found. Unlike his companion Brøndal, much more Jakobsonian in spirit in his reference to the philosophical tradition and to a multiplicity of sources for his version of structuralism, Hjelmslev wants to free himself from any metaphysics, inspired by logical positivism as he is. Maybe he saw too much metaphysical heritage in references to the phenomenological tradition? A third possibility is influence via an intermediate (so as for instance Anton Marty¹⁴; both Jakobson and Brøndal seem unlikely in that role) or from a common source of inspiration (Brentano).

If we go into the history of glossematics in more detail, an even more complicated relation to mereological considerations shows up. In addition to the dependence calculus of the *Prolegomena*, Hjelmslev has a further concern with mereological issues in his calculus of so-called "concept zones" (in the content side, approximately corresponding to "semantic domains") and their parts. This idea appears as early as 1933, in the context of the semantic motivation of grammatic categories and in direct discussion with Jakobson's markedness concept (Hjelmslev 1985: 35ff). Jakobson's binarism of course implies that paradigms with three terms must be analyzed as degenerate versions of four-term systems obtained by the combination of two two-term systems. Arguing against binarism, Hjelmslev proposes — probably with inspiration from Brøndal — a tripartition instead of a bipartition of the zone of a given conceptual substance, yielding two opposed parts with a neutral domain between them. (To see which use Hjelmslev makes of these ideas, let us mention his analysis of grammatical numerus which is seen as founded on the concept zone of discrete versus compact, including a neutral zone between them. Hjelmslev 1972: 94f). Interestingly, Hjelmslev calls this calculus "sublogical"; it is inspired by Lévy-Bruhl's idea of "participation" in "primitive" thought where opposed terms may share content. Thus formal logic is supposed to be one possible derivate from this sublogical basis, an idea not unrelated to Husserl's idea of a phenomenological foundation of logic (Husserl 1985).

Such a three-part zone now may be occupied by different terms, defined by placing each their emphasis on differing combinations of

¹⁴ Marty, whose 1908 *Untersuchungen zur Grundlegung der allgemeinen Grammatik und Sprachphilosophie* refers to the *Logische Untersuchungen*. Hjelmslev refers to Marty at several occasions, but not directly in connection to the dependence algebra.

the three parts of the zone, this emphasis indicated by a slash in the relevant part(s) of the concept zone:



So a term of a paradigm is now seen as a specific combination of the three parts of the paradigm's concept zone. Thus, Jakobson's markedness-unmarkedness distinction corresponds to only two of these possibilities, namely the term occupying only one of the opposed terms (markedness), together with the term indistinctly occupying the whole concept zone (unmarkedness). Thus, unmarkedness is no longer the mere absence of the marked term, unmarkedness is reconstructed as the vague presence of the whole of the concept zone. But the distribution of the emphasis/non-emphasis over the three-part concept zone yields seven possibilities (with the exclusion of the zero case without any emphasis at all) instead of two. Later in the development of glossematics, this calculus is further complicated by the introduction of two emphasis degrees (already in 1934, cf. Hjelmslev 1972), and in the elaborated technical presentation of glossematics in the "Resumé" of the early forties (Hjelmslev 1975), a new set of seven possible emphasis patterns over three-part concept zones is established. These different emphasis terms now combine pairwise to give no less than twelve possible different polar opposites within one and the same concept zone (Hjelmslev 1975: 42), just like systems with from two up to six internally opposed terms appear as a possibility of different emphases of a concept zone (*ibid.* 31–32). It must be said, though, that the implicit constraints preventing free combination to give an even larger set of possibilities are never made explicit, and neither of the two recent and very thorough reconstructions of Hjelmslev (Gregersen 1992, Rasmussen 1992) are able to make clear the nature and role of these constraints. In our context, it must be added, though, that the concept zone calculus in its "bound" variant is argued to give exactly the three dependence types as a corollary (Hjelmslev 1975: 60). Thus, it might be said that just like in Husserl, an explicitly mereological

calculus (the partitioning of the concept zone it into three parts and their possible combinations) results in a dependence calculus — even if the route of derivation is much more labyrinthine in Hjelmslev's case and necessitates further research surpassing the scope of this paper. As to the influence question, there seems to be a thin thread leading from the 3rd investigation via Jakobson's markedness concept to Hjelmslev's complicated three-value markedness calculi and further on to his three dependence types — but without any explanation as to how exactly the same dependence calculus appears at each end of that thread.

Anyway, the radical purism in Hjelmslev's dependence calculus as well as in his concept zone calculus also has other consequences which is my main reason to bring him into the discussion in this context of actual mereological thought. Hjelmslev's purism namely displays some dangers in a too consequent mereological approach. To see this, take Hjelmslev's mereological treatment of linguistic tradition. The whole inventory of morphology and syntax, of distinctions between syllables, words, flections, sentences, hypotaxis, parataxis, etc. must be given up completely in favour of a purely mereological description. We are not supposed to distinguish preposition and government, e.g., in any other way than by knowing that one selects the other, the whole complex of the two again being independent of the clause as a whole on sentence level. The same goes for semantics where the shortcomings of the theory were most easily felt; the consequent mereological approach prohibited any phenomenological semantics in so far as the elements of meaning were allowed to receive purely arbitrary denominations only¹⁵. Being functives, they were to be referred to by algebraical letters, and their semantic content was supposed to be read off their mereological dependencies only¹⁶. In lexical semantics, the theory restricted itself to banalities such as that the meaning of "bull" was dependent on the meanings of "ox" and "male", respectively.

¹⁵ Here, Diderichsen is admirably clear in his early insistence that formal glossematic description is impossible without a prior phenomenological sensibility for identities and differences (Diderichsen 1966: 123 [1948]).

¹⁶ This consequence is still visible in Greimasian semiotics, having inherited the whole of its metatheoretical apparatus from the *Prolegomena*. In the semiotics of the Paris school, the orthodoxy teaches that denominations of theoretical as well as meta-theoretical terms are completely arbitrary; still they are invariably chosen so they are relatively easily understandable with reference to ordinary language or linguistic tradition.

What is to be learned from the partial failure of Hjelmslev's grand mereological project? The set of restrictions which the theory admits deliberately cuts it off from possible insights, first in the letting out of sight language's reference to any context ("matter"), and second in its dogmatic decision that any relation between expression is content is merely arbitrary. Both these ideas have been excellently attacked by the cognitive semantics tradition¹⁷. The main implication in this context, however, to be drawn concerns the consequences of the idea of a purely mereological dependence calculus used as a descriptive meta-language. Such a calculus so to speak conceives its object from outside, sees it constructed by discrete building-blocks holding a highly restricted set of dependencies between them. To describe language and other semiotic phenomena (which is, implicitly, the ambition of glossematics, the matter of expression being of secondary importance) it is necessary not to delimit oneself beforehand to one selected calculus (even if it is a fertile one) of description. Moreover, Hjelmslev's use of it repeats some of the Berlin School's less lucky consequences without gaining its advantages: Hjelmslev ceases to use traditional linguistic terminology, so that for instance morphology versus syntax should be mereologically reinterpreted. But doing so, the Graz School advantage of being able to distinguish a part (a word's morphology) from the role played (in sentence syntax) in a gestalt, is lost.

Another drawback is extremely discontinuous character of the calculus, given by the definition of the dependence calculus to hold between well-defined units of a lower level (which is not a necessary implication by dependence calculi). All continuous phenomena in signification is a priori bracketed by the choice of so restricted a meta-language (on the linguistic expression side intonation, prosodic features, gestures; on the content side the whole question of continuous schemata and their (continuous) eidetic variation in semantic description.)

Finally, a drawback is a fact which Barry Smith has often referred to: mereology's explicit and admitted weakness. In Lesniewski's version, this was even picked as a special privilege of the theory, making it independent of ontological assumptions. The flip side of this is that mereology's weakness makes it unfit to describe most empirical wholes without further formal equipment. In linguistics, this further equipment is most often tacitly presupposed — in for instance the idea

¹⁷ For instance Ronald Langacker at the "Wholes and their Parts" conference in Bolzano 1998, where this paper was presented given.

of co-existence of terms in a sentence. But dependence relations does not in any way imply the existence of parts in the same place. A whole consisting of the tone A, my left shoe and the contour of England is perfectly admissible. Contiguous wholes thus require at least additional topologies for their description, making it possible to distinguish connected and non-connected wholes — and they may require metrics, spatio-temporal embedding and much more in order to map further properties of interest; this goes for objects in general as well as for objects of semiotics specifically. Mereology and its dependence calculi do remain a very important formal part of semiotics, but we have no reason to assume that they exhaust the formalisms necessary, just like a considerable work in formal ontology will be required to yield a more refined taxonomy of gestalt types.

Peirce

Consequently, a much more liberal stance must be taken with respect to which forms may count as significant. A reflection of this kind, also with mereological implications, is found in Charles Peirce, albeit in two of the less well-known corners of his theory, namely in his theories of *diagrams* and of *abstraction*, respectively¹⁸. As is probably

¹⁸ Peirce's explicit interest in the whole-part issue is delimited to the article on that subject in Baldwin's dictionary. Here, he finds that a whole is always a collection which is no easily defined concept; moreover, it is, just like in large parts of the Brentano tradition, an *ens rationis*, an abstraction on the basis of more concrete parts. Just like the more sensitive parts of this tradition, Peirce will admit both subjective and objective wholes. He concludes this small article with a alphabetical botanics of whole types which he does not pursue further, but which may be interesting to quote here (Peirce 1998, 1: 383):

"Many adjectives are used to distinguish different kinds of wholes. Certain of the phrases may be defined.

Actual whole: any whole which cannot exist without the existence of its parts. Usually identified with the Constitute whole. Monboddó's definition (Ancient Met., i. 479) is not quite accurate.

Collective whole, or aggregate whole: defined by Chauvin as "that which has material parts separate and accidentally thrown together into one, as an army", etc. But the example shows that organization does not disqualify a whole from being called collective, although the term *totum per aggregationem* will no longer be applied to it, in that case. In so far as a whole is collective, any other relation between its parts is put out of view.

Composite whole: a term of Burgersdicius, who (Inst. Met., I. xxii. §7) defines it as *quod ex duabus partibus constat quarum una est in potentia ad alterum et altera*

vice versa actus est alterius. It includes the whole by information and the whole by inherence.

Comprehensive whole: a whole of logical comprehension.

Constituent whole: a whole which is essential to its parts.

Constitute whole: a whole whose parts are essential to it. See Actual whole (above).

Continuous whole: a continuum regarded as a whole. In order to define it, it would first be necessary to define continuity. Now we have, perhaps, not yet succeeded in analyzing the conception of continuity; for what the mathematicians call by that name, such as the relations of all real quantities capable of being designated to an indefinite degree of approximation by means of a whole number and a decimal, does not answer the requisites of the problem.

Copulative whole: a whole consisting of a sign which is essentially applicable to whatever certain signs, called its parts, are all applicable, but is essentially inapplicable to anything to which any one of these signs is inapplicable.

Definite whole: a whole constituted by genus and difference.

Definitive whole: see Definite whole (above).

Discrete whole: the same as a Collective whole (above).

Disjunctive whole: a whole consisting of a sign which is essentially applicable to whatever any one of certain signs, called its parts, is applicable, but is essentially inapplicable to anything to which none of these parts is applicable.

Dissimilar whole: same as Heterogeneous whole (below).

Essential whole: great confusion exists in the use of this very common expression. Aquinas (*Summa Theol.*, Pt. I. lxxvi. 8) uses it in a broad sense which would make it about equivalent to Burgersdicius' composite whole, or perhaps broader. On the other hand, it is sometimes restricted to the whole per informationem, and this is perhaps the best settled use. But others make it include the physical and the metaphysical whole as its two species.

Extensive whole: a whole of logical extension, usually called a subjective or logical whole.

Formal whole: a comprehensive whole, especially of essential comprehension. See Actual whole (above).

Heterogeneous whole: a term of Aquinas; a whole whose parts are dissimilar from the whole.

Homogeneous whole: a term of Aquinas; a whole whose parts are similar to the whole, as the parts of a whole of water are.

Integral whole (a term in common use since Abélard's time): Blundevile (1599) says, "Whole integral is that which consisteth of integral parts, which though they cleave together, yet they are distinct and severall in number, as man's body, consisting of head, brest, belly, legs, etc." The usual definition is *quod habet partem extra partem*, which restricts it to space. Burgersdicius, however, says that parts which differ in their ordinal places are *partes extra partes*.

Integrate whole: a pedantic variant of Integral whole (above).

Logical whole: same as Universal whole (below).

Mathematical whole: same as Integral whole (above).

Metaphysical whole: a whole in that respect in which a species is the whole of its genus and difference. See Formal whole (above).

well known, one of the main projects of Peirce's philosophy is the classification of signs — signs in general, including the signs used in the sciences, so that his theory by the same token becomes an epistemology. A crucial part of this epistemology connects the two issues of diagrams and abstraction (which, if taken separately, form rather remote and seemingly insignificant branches in Peirce's vast tree of triparting distinctions¹⁹).

Natural whole: a term proposed by Hamilton to replace Comprehensive or Metaphysical whole; as if that were not sufficiently provided with aliases under which to hide itself.

Negative whole: a unit regarded as a whole, as in the phrases *deus totus est ubique*, and *anima est tota in toto corpore*.

Physical whole: a whole compounded of substance and accident; but some say of matter and form; and some that both come to the same thing. In the peripatetic view, however, substance is form, not matter.

Positive whole: a whole consisting of parts. See Negative whole (above).

Potential whole: same as Universal whole (below); so called because the genus does not actually, but only potentially, contain the species, etc.

Potestative whole: a term of Aquinas; equivalent to Potential whole (above).

Predicative whole: a whole of logical depth.

Quantitative whole: same as Integral whole (above).

Similar whole: see Homogeneous whole (above).

Subject whole: same as Subjective whole (below).

Subjective whole: a very venerable name for Universal whole (below).

Substantial whole: a whole of logical breadth.

Universal whole: see Universal.

Whole by accident: such a whole as neither essentially belongs to the parts nor the parts to it.

Whole by aggregation or aggregative whole: same as Collective whole (above) in an exclusive sense.

Whole by information: a compound of act and power in the same kind, such as man, according to the Aristotelian theory of the soul.

Whole by inherence: same as Physical whole (above).

Whole by itself or per se: a whole which essentially belongs to its parts or its parts to it."

¹⁹ Thus, as to diagrams, they are a subspecies of icons. One of Peirce's most famous classifications is the tripartition of signs as to their reference to their object which may take place due to similarity, cause, or convention, giving icons, indices, and symbols, respectively. Now these three are not species of a genera, they are rather to be conceived of as Russian dolls, so that indices typically involve icons, and symbols involve both the simpler types of signs. Now, the category of icons is in turn subdivided again, into images, diagrams, and metaphors. The first icons are like their object with respect to a simple quality, the second due to interrelations between its parts, and the third locates a similarity in a third object.

As to hypostatic abstractions, they form a triad together with concrete signs and collective signs (referring to individuals and collections, respectively), all of them

The crucial thing in this respect is that to Peirce, abstract diagrams are the machines for all necessary reasoning. It is important here to notice, that the definition of icons as signs by similarity is not trivial; it is expanded into the definition that an icon is a sign by the contemplation of which it is possible to discover new truths not stated in the construction of the icon. When this is applied to the subtype of icon called diagram, this implies that by the contemplation of the interrelation of parts in a whole you may discover new properties not stated in the construction recipe for it. When we want to reason about anything, be it empirical or apriorical, we imagine a diagram of it, and then we observe the diagram while we perform manipulations of it. Diagrams thus forms a very general concept in Peirce, including for instance geographical maps, machine instructions, geometrical figures, graphs, mental maps, schemata etc. This broad generality is one of the great points in the concept, being at the same time a basically mereological concept²⁰.

The diagram is a stylized picture of its object — and this stylization involves two kinds of abstractions. One is the so-called “*prescission*”, the second of Peirce’s three distinction types, dissociation, *prescission*, and discrimination, respectively. These separation types, in fact, form the equivalent in Peirce to the dependence calculi we isolated in the other three semioticians. Dissociation separates independent objects; *prescission* separates objects which may be supposed to exist separately; discrimination separates objects which may only be represented separately. The precise relation between these distinction types and the dependence calculi of Husserl and Hjelmlev has not been established yet, but the following is a first attempt: dissociation is the distinguishing ability corresponding to constellation in Hjelmlev and independence in Husserl, while *prescission* separates a founding part from a founded part and discrimination vice versa (so that interdependent parts may only be discriminated, while unilaterally dependent parts may be *prescinded* (the independent part) or discriminated (the dependent part).

When making a diagram, we must *prescind* it from the particular token drawn on a piece of paper so as to grasp it as an ideal object. Furthermore, the activity we may picture with a diagram by manipu-

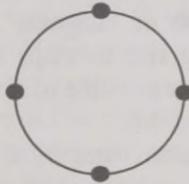
subtypes of singular objects which, in turn, form a triad of signs for immediate objects, including vague signs, singular signs and general signs.

²⁰ On the crucial role played by diagrams in the mature Peirce’s thought, see Stjernfelt (2000).

lating it, may itself be made the object of a higher-order diagram. This is “hypostatic abstraction” in Peirce’s system, to be sharply distinguished from the distinction types: it makes a noun out of a predicate and thus makes it possible further to investigate the properties of this predicate. Prescission thus is a focussing mechanism, leading to the predicative isolation of still more general properties of an object — while abstraction is an objectifying mechanism, making an object of thought out of a predicate, or, as Peirce puts it sloganlike, it makes a thing out of a thought.

Now, in addition to arise by means of prescission, the diagram — be it empirical or pure — forms a whole consisting of interrelated parts. The character of the interrelations make certain experiments possible, and these experiments are now interpreted as holding also for the object depicted:

Deduction is that mode of reasoning which examines the state of things asserted in the premisses, forms a diagram of that state of things, perceives in the parts of that diagram relations not explicitly mentioned in the premisses, satisfies itself by mental experiments upon the diagram that these relations would always subsist, or at least would do so in a certain proportion of cases, and concludes their necessary, or probable, truth. For example, let the premiss be that there are four marked points upon a line which has neither extremity nor furcation. Then, by means of a diagram,



we may conclude that there are two pairs of points such that in passing along the line in any way from one to the other point of either pair, one point of the second pair will be passed an odd number of times and the other point an even (or zero) number of times. This is deduction. (Peirce 1998, 1: 66)²¹

²¹ The shortest presentation is probably: “For mathematical reasoning consists in constructing a diagram according to a general precept, in observing certain relations between parts of that diagram not explicitly required by the precept, showing that these relations will hold for all such diagrams, and in formulating this conclusion in general terms. All valid necessary reasoning is in fact thus diagrammatic” (Peirce 1.54). The object of mathematics will be pure diagrams of any kind, while ordinary reasoning as

Take for instance a geographical map — a continuous diagram — constructed by triangulation from selected points in the landscape. I can now perform the experiment on the diagram, measuring with a yardstick and dividing with the scale — showing that there is 40 miles from Bolzano to Trento — even if this information did not have any place at all in the construction of the map. To Peirce, this definition of diagram includes even algebra — in so far as it is possible to manipulate algebraic formulae in order to obtain new information (solving equations, e.g.), algebra must be counted among the central subtypes of diagrams.

It is an important feature of diagrams that they are at the same time general and observable (in this way they are Peirce's version of the Schemata of Kant's 1st Critique, uniting concepts and intuition). They permits us to see, in a token drawing, a diagram type, and hence that the manipulation we undertake is generally valid for a whole class of related manipulations, not only the single one undertaken on the diagram drawing. An important diagrammatical operation is the working together of *prescission* with abstraction, that is, a diagram property is selected as an object which may itself be subject to rule-governed manipulation. Abstraction permits the diagram to be recursive and embed one diagram with its whole set of procedures as an object in a more abstract diagram making it possible to investigate the first one. To stay in the map example, we can for instance generalize from the single map and abstract the subject of "mapness", leading to the question of possible projections giving rise to maps with various properties. In Husserlian slang, this makes possible to investigate still more abstract moments as if they were *Stücke*.

The strength of the diagram category is that it — in contrast to the dependence calculi of the early Husserl and of glossematics — displays the wide variety of (not only) mereological devices used in the construction of meaning. In any case, namely, a diagram analyses its object into a collection of interrelated parts, the relations of which may be specified in many terms in addition to dependence: connectiveness, boundedness, quantity, locality, form, metric relations ... But in all cases the relations between the parts must be "rational", that is, they must be defined clearly in order to facilitate unambiguous dia-

well as the empirical sciences will use the same diagrams while being constrained by the appearance of the world as well.

gram manipulation. Thus, they include all relations giving possibly rise to necessary reasoning²².

To conclude

The four semioticians discussed here all include mereological investigations at central points of their thought — but they do not ascribe it the same role. In Husserl, it forms a crucial part of formal ontology, relevant for any ontological domain whatsoever (but not necessarily with any claim for being exhaustive for formal ontology), and it subsequently plays a central role in his pure grammar. In Hjelmslev, exactly the same calculus is supposed to be the formalism relevant to describe all possible formal properties in semiotic systems as a presuppositionless metalanguage deprived of any of the ontological ambitions of phenomenology. Yet, Husserl's refusal that "vague morphologies" may be formalized, may approach him to Hjelmslev, and their strong reliance on dependence calculi may probably have its reason in their reliance on the former's weak, methodological reliance upon logic, and the latter's strong methodological reliance upon language, respectively, both being discontinuous systems. Jakobson, on the other hand, makes a less theoretical use of mereology, but his theory points towards a pragmatological grounding of mereology in prelinguistic, phenomenological perception of wholes with atypical parts — generalizing the experience of discovery: the sudden appearance of a new, strange phenomenon within the bounds of the supposedly well-known. Peirce, finally, from a classificatory point of view, yields the least explicit, but most comprehensive mereology, including continuous mappings of all sorts, delimited by the efficacy constraint of the pragmatic maxim only.

Thus, all four of them may contribute to the ongoing investigation of mereology's role in semiotics. Hjelmslev's and Husserl's precise

²² Maybe this very general notion of diagram — parts with unspecified interrelations being open to abstraction to classes of interrelations — makes Peirce's schema an early forerunner of category theory. Finally, I imagine Peirce's very wide concept of diagram can not only generalize Kant's idea of a schema, but also serve as a unifying concept for the various schema-like ideas that prevail in present-day cognitive semantics (image schemas, force dynamics, landmark-trajectory, etc.). If so, then the semantic processes mapped in this tradition — metaphorical mapping, blending, conceptual extension etc. — would be understandable as specific variants of manipulation on a diagram.

dependence calculi from one side — freed from the former's exhaustibility claims and fear for ontology — Jakobson's empirical and pragmatic fertilization of these ideas — and as a general framework, Peirce's sketch of a diagrammatic semiotics including dependence calculi in its prescission theory and whole-part mappings in its diagram theory. The integration of these insights should make the relation between semiotics and mereology a serious challenge.

References

- Cassirer, Ernst 1945. Structuralism in modern linguistics. *Word: Journal of the Linguistic Circle of New York* 1(2): 99–120.
- Diderichsen, Paul 1966. Helhed og struktur: Udvalgte sprogvitenskabelige afhandlinger. København: G. E. C. Gad. [In German: 1976. Ganzheit und Struktur: Ausgewählte sprachwissenschaftliche Abhandlungen. München: Fink.]
- Gardies, Jean-Louis 1985 *Rational Grammar*. München: Analytica [orig. 1975].
- Gregersen, Frans 1992. *Sociolingvistikens (u)mulighed* [The (Im)Possibility of Socio-Linguistics]. Copenhagen: Tiderne Skifter.
- Hjelmslev, Louis 1928. *Principes de grammaire générale*. Copenhagen: Høst og Søn.
- 1943. *Omkring sprogteoriens grundlæggelse*. Copenhagen: Munksgaard [Eng. version *Prolegomena to a Theory of Language*, 2nd. ed. Madison: The University of Wisconsin Press 1969].
- 1972. Sprogssystem og sprogforandring. [Language System and Language Change. 1934]. Copenhagen: Nordisk Sprog- Og Kulturforlag.
- 1975. *Resume of a Theory of Language*. Copenhagen: Nordisk Sprog- og Kulturforlag (approx. 1943).
- 1985. *Nouveaux essais*. Paris: PUF.
- Holenstein, Elmar 1975. Roman Jakobsons phänomenologischer Strukturalismus. Frankfurt/M: Suhrkamp.
- 1976. Linguistik, Semiotik, Hermeneutik. Frankfurt/M: Suhrkamp.
- Husserl, Edmund 1970. *Philosophie der Arithmetik (Husserliana XII)*. Den Haag: Martinus Nijhoff.
- 1975. *Logische Untersuchungen I (Husserliana XVIII)*. Den Haag: Martinus Nijhoff.
- 1979. *Aufsätze und Rezensionen (1890–1910) (Husserliana XXII)*. Den Haag: Martinus Nijhoff.
- 1984. *Logische Untersuchungen II, I.–II Teil (Text nach Husserliana XIX/1–2)*. Hamburg: Felix Meiner.
- 1985. *Erfahrung und Urteil*. Hamburg: Felix Meiner.

- Jakobson, Roman 1971–1985. *Selected Writings* I (1971), II (1971), VII (1985). Berlin: Mouton.
- Luschei, Eugene C. 1962. *The Logical Systems of Lesniewski*. Amsterdam: North-Holland Publishing Company.
- Münch, Dieter 1993. *Intention und Zeichen: Untersuchungen zu Franz Brentano und zu Edmund Husserls Frühwerk*. Frankfurt/M: Suhrkamp.
- Peirce, Charles S. 1976. *New Elements of Mathematics* I–IV. (C. Eisele, ed.). The Hague: Mouton.
- 1998 [1931–1958]. *Collected Papers*, I–VIII. London: Thoemmes Press.
- Rasmussen, Michael 1992. *Hjelmslevs sprogteori*. [Hjelmslev's Theory of Language]. Odense: Odense Universitetsforlag.
- Smith, Barry (ed.) 1982. *Parts and Moments: Studies in Logic and Formal Ontology*. München: Philosophia Verlag.
- 1994. *Austrian Philosophy*. Chicago: Open Court.
- (forthcoming). Logic and formal ontology. In: *Manuscrito*.
- Stjernfelt, Frederik 1992. Categorical perception as a general prerequisite to the formation of signs? On the biological range of a deep semiotic problem in Hjelmslev's as well as Peirce's semiotics. In: Sebeok, Thomas A. and Umiker-Sebeok, Jean (eds.). *Biosemiotics: Semiotic Web 1991*. Berlin: Mouton de Gruyter, 427–454.
- 1992. *Formens betydning: Katastrofeteori og semiotik* [The Meaning of Form: Catastrophe Theory and Semiotics]. Copenhagen: Akademisk Forlag.
- 1997. *Rationalitetens himmel* [The Heaven of Rationality]. Copenhagen: Gyldendal.
- 1999. Biosemiotics and formal ontology. *Semiotica* 127(1/4): 537–566.
- 1999. How to learn more: An apology for a strong concept of iconicity. In Johansson, T. D.; Skov, Martin and Brogaard, Berit (eds.), *Iconicity: A Fundamental Problem in Semiotics*. Aarhus: NSU Press, 21–58.
- 2000. Diagrams as centerpiece of a Peircean epistemology. *Transactions of the Charles S. Peirce Society* 36(3): 357–384.
- (forthcoming a). Categories, Diagrams, Schemata. In: Stjernfelt, Frederik and Zahavi, Dan (eds.), *100 Years of Phenomenology — Logische Untersuchungen Centenary*.
- (forthcoming b). Biology and abstract schemata. In: Brogaard, Berit and Smith, Barry (eds.), *Rationality and Irrationality*.
- (forthcoming c). A Natural Symphony? To what extent is Uexküll's *Bedeutungslehre* actual for our day's semiotics. *Semiotica*.
- (forthcoming d). Die Vermittlung von Anschauung und Denken: Semiotik und Schematismus bei Kant, Cassirer und Peirce. *Zeitschrift für Semiotik*.
- Uldall, Hans-Jørgen 1967. *Outline of Glossematics*. Copenhagen: Nordisk Sprog- og Kulturforlag.
- Willard, Dallas 1982. Wholes, parts, and the objectivity of knowledge. In: Smith, Barry (ed.), *Parts and Moments: Studies in Logic and Formal Ontology*. München: Philosophia Verlag, 379–400.

Мереология и семиотика

Статья дает обзор роли мереологии — теории частей и целых — в семиотике. Коротко представлена мереология четырех крупнейших семиотиков — Гуссерля, Якобсона, Ельмслева и Пирса, описывается роль мереологии в общем строении их теорий со ссылкой на традицию Brentano. Наконец, предпринята оценка сильных и слабых сторон этих ученых и предлагаются некоторые перспективы дальнейших исследований.

Mereoloogia ja semiootika

Artiklis antakse ülevaade mereoloogia (teooria osadest ja tervikust) rollist semiootikas. Lühidalt esitletakse nelja suure semiootiku — Husserli, Jakobsoni, Hjelslevi ja Peirce'i — mereoloogiat ja kirjeldatakse mereoloogia osa nende teooriate ülesehituses juhindudes Brentano traditsioonist. Püütakse anda hinnangut nimetatud teadlaste tugevatele ja nõrkadele külgedele ja pakutakse välja mõningad uued uurimissuunad.

A note on Vico and Lotman: Semiotics as a “science of the imagination”

Marcel Danesi

Victoria College, University of Toronto,
Toronto, Ontario M5S 1K7, Canada
e-mail: marcel.danesi@utoronto.ca

Abstract. The Italian philosopher Giambattista Vico foreshadowed many of the ideas currently being entertained by the modern cognitive and human sciences. By emphasizing the role of the imagination in the production of meaning, Vico showed how truly ingenious the first forms of representation were. His view that these forms were “poetic” is only now being given serious attention, as more and more linguists and psychologists come to realize the role of metaphor in the generation of abstract systems of representation. The Estonian semiotician Yuri Lotman espoused a basically similar view, highlighting the role of the poetic imagination in the generation of the textuality that holds cultures together in meaningful ways. A comparison of these two exceptional thinkers has never been entertained. This note aims to do exactly that. Specifically, it takes a first glimpse at the parallels of thought and method that inhere in the main works of these two ground-breaking thinkers. Such a comparison will establish a theoretical framework to make semiotics a true “science of the imagination”. It will show that semiosis and representation are not tied to any innate neural mechanisms, but rather to a creative tendency in the human species to literally “invent itself”.

Introduction

Since the 1970s there has been a noticeable increase of interest and writing on two previously-neglected figures in the history of ideas — the Italian philosopher Giambattista Vico (1668–1744) and the Estonian semiotician Yuri Lotman (1922–1993). The reason for this is,

arguably, that the modern human and cognitive sciences are finally “catching up” to their ideas. Both were interested, fundamentally, in unraveling the *raison d'être* and origins of meaning structures in the human species and in how these constituted the source of cultural systems. Both saw the *imagination* as the primary faculty of mind underlying the invention of these very structures. Vico called it *fantasia*; Lotman characterized it as a kind of *energy*. Simply put, for Vico and Lotman *Homo sapiens* was “sapient” because it was, in essence, an imaginative creative species. Both went against the Western tradition of studying the human mind “objectively” or “scientifically”, arguing that only an orientation based on a study of the imagination would provide truly meaningful insights into the nature of human knowledge and of how it is literally created by the mind.

To the best of my knowledge, no one has ever entertained a comparison of these two ground-breaking thinkers. That is the purpose of the present brief note. It is unlikely that the great Estonian semiotician ever read Vico. So, the comparison to be carried out here is not the typical one of showing the purported influence of one thinker upon another. Rather, the perspective to be adopted in this essay inheres simply in highlighting the remarkable “isomorphisms” that *can* be detected in the work of Vico and Lotman. Specifically, the comparison will be carried out within the framework of three fundamental notions, named by Vico as *fantasia*, *ingegno*, and *memoria* (see Verene 1981, Mooney 1985, Bedani 1989, Danesi 1993 for detailed discussions of these notions). All citations from Vico’s *New Science* — his main work — are taken from T. G. Bergin and M. H. Fisch’s 1984 revised translation of the third edition published in 1744. Allusions to Lotman’s ideas are based on the following works: Lotman (1977, 1980, 1984, 1990, 1994), Lotman and Uspenskij (1973, 1978), and Ivanov, Lotman, Pjatigorski, Toporov, and Uspenskij (1998).

Fantasia

In Vico’s times, Cartesianism dominated the academic scene of the day, causing the older tradition, centered on the study of language and literature, to lose ground to an emphasis on mathematics, critical philosophy, and the sciences. Vico warned that an emphasis on logic was ultimately counterproductive. Natural learning, he emphasized, followed a developmental route that started from concrete modes of thinking, pro-

gressing only gradually, and with significant effort, to rational modes. In this developmental scenario, Vico viewed the imagination, which he called the *fantasia*, as the central force in knowledge-acquisition. His *magnum opus* of 1725, *La scienza nuova* (*The New Science*, Vico 1984 [1725]) is, in fact, characterizable as a “science of the imagination”, as Verene (1981) aptly calls it. This work should have guaranteed him a wide readership and a broad range of responses. But it went virtually unnoticed until the latter part of the twentieth century as a truly remarkable treatise on the mind, when the human and cognitive sciences finally started to take serious notice of the kinds of things Vico was thinking and writing about over two and a half centuries ago. His ideas on the nature of human rationality, and on how it must have originated in the imagination, are not only highly compatible with current thinking in some of the modern sciences, but they are also highly suggestive of future directions for these sciences to pursue. The idea that cognition is an extension of bodily experience, a kind of abstracted sensoriality, which is starting to receive serious and widespread attention by some psychologists and linguists, is, as a matter of fact, the unifying principle that Vico utilized to tie together all the thematic strands that he weaved throughout *The New Science*.

Vico argued that this extension is accomplished through the workings of the imagination. He saw it as the mental faculty that generated rational thought, language, and ultimately, culture. He sought access to its workings, not by means of a Cartesian-type method of observation and analysis, but through a study of the symbolic artifacts — especially humanity’s first words and myths — to which the primordial imagination gave birth. For Vico, Descartes’ “spectator theory” of knowledge was of little value, for he did not believe in a world as an object to be studied independently of the individual’s involvement in it. The purported “facts” that scientists discovered were, for Vico, no more than “artifacts” of the mind. The reason why we are so convinced by such artifacts is that we ourselves have invented them. As an alternative to Descartes’ *Cogito ergo sum* perspective, Vico proposed one by which humans first feel, then vaguely perceive what they have felt, and, finally, attempt to develop distinct ideas from their perceptions. So, in counterposition to Descartes’ Latin maxim, Vico’s perspective could perhaps be phrased as *Sentio ergo sum*.

The cornerstone notion of *The New Science*, ‘poetic wisdom’, can be found in Book Two. There, Vico’s objective was to discuss the first form of mentality — the innate universal capacity to think “poeti-

cally”, i.e. iconically and sensorially. The most important feature of the poetic mind is that it is highly metaphorical and mythological. It is, in other words, totally dependent on the images generated by bodily experiences as they are encoded and shaped by the imagination. From this “poetic” state of mind the first human cultures took shape, developing the first institutions, especially religious, burial, and marriage rites. The organization of early cultures is, thus, universally “poetic;” i.e. it is based upon, and guided by, conscious bodily experiences that have been transformed into generalized ideas by the human *fantasia*.

The distinguishing feature of the primordial form of human consciousness is that it allows us literally to “imagine” stimuli that are no longer present for the sensory system to react to in its biologically-programmed way. The thought units that result from these images are *iconic signs* — units of thought that stand for their referents in direct ways. These signs also allow humans to think about their referents away from their contexts of occurrence. The *fantasia* can thus “create” new realities totally within the confines of mental space — hence the meaning of *imagination* as a creative faculty. By not being constrained to a stimulus-response environment, the imagination has bestowed upon humans the capacity to “imagine” fictional (context-free) beings, objects, and events. The *fantasia* thus liberates human beings from the constraints imposed on all other organisms by biology. As Verene (1981: 101) puts it, the imagination allows humans “to know from the inside” by extending “what is made to appear from sensation beyond the unit of its appearance and to have it enter into connection with all else that is made by the mind from sensation”.

The debate on the imagery goes back to Plato, who separated the image (*eikon*) from the idea (*eidos*). This set in motion the tendency to view rational thought as separate from mental imagery and as a more powerful shaper of cognition. Descartes (1637) reinforced this notion by claiming that mental images proceed without logic, and so cannot be studied scientifically. The Cartesian view ignores, of course, the Renaissance tradition of *ingenium* and the fact that even Plato used myths or likely narratives as the primary means for gaining access to an understanding of “reality”. Paradoxically, as Verene (1981) has pointed out, Descartes’ own style of presentation unfolds in the form of highly suggestive and creative imagery. What Plato, Descartes, and all philosophers fixated on the *idea* forgot, according to Vico, was that mental imagery is essential to thought. In fact, he makes the ability to

form and extend images a universal feature of cognition. The *fantasia's* image-making capacity is a primordial power of the human mind that makes cognition itself possible.

Remarkably, in the work of Lotman it is fairly easy to detect the same Vichian notion that the basic form of mentality is poetic — a form which he characterizes as *energeia*, a kind of “creative potency” that undergirds every act of meaning-making, from the simple invention of words to the creation of elaborate artistic texts. As Torop (1999: 11) aptly puts it, Lotman’s notion of creative potency is at the basis of his corollary notion of *modeling* — a view that has started to influence semiotic methodology in systematic ways (e.g. Cáceres Sánchez 1997, Kull 1999, 2000, Torop 1998, Sebeok 1998, Sonesson 1998, Danesi and Perron 1999, Sebeok and Danesi 2000). Essentially, as I read Lotman with “Vichian eyes”, I see his notion of creative modeling as *fantasia*. For both Vico and Lotman this creative faculty is the force that links the biosphere with the semiosphere in all acts of representation (see also Cornwell 1992, Kristeva 1994, Mandelker 1994, Kull 1998, and Portis-Winner 1999 on the Lotmanian notion of semiosphere).

The semiosphere is “the smallest functioning mechanism” (Lotman 1990: 125) of human cognition that allows the mind to conceptualize basic experiences of sensation. Like the great biologist Jakob von Uexküll (1909), Lotman finds a constant point of contact between biology and human mental activity. Uexküll argued that every species had different inward and outward lives. The key to understanding this duality could be found in the anatomical structure of the species itself and in the kind of innate modeling systems it possessed. Animals with widely divergent anatomies and modeling systems do not have access to the same kinds of experiences and perceptions (Sebeok 1990, 1994). For Lotman, the ability to convert biospheric reality into semiospheric reality is the reason why, over time, the human species has come to be regulated not by force of natural selection, but by the “force of history”. As opposed to Nature, culture is everywhere *meaningful*, everywhere the result of modeling structures that seek to give meaning, order, and continuity to experience. The aim of semiotics is, therefore, to examine, first and foremost, the origin and evolution of the signifying properties of these structures. And if there is any one finding of semiotic research that stands out from all others it is that, despite great diversity in the world’s sign systems, the difference is more one of detail than of substance. These systems serve the

original functions for which they were designed, revealing strikingly similar patterns throughout the world.

The semiosphere emerges as a response to a specific human need to model and interpret the dynamic flux of the world in the form of signs. Of all the modeling systems that characterize human semiosis, no other is so powerful and so unique as is language. Language is the ultimate achievement of semiosis. But, as Lotman reminds us cogently in virtually all his writings, it is highly interconnected to nonverbal modes of modeling and communication. Indeed the essence of language is *poetry*. It is the same type of modeling — creative simulation — that characterizes drawings, music, artifacts and other nonverbal *models* of the world that people make and use routinely. Together with verbal models, they constitute one huge *Text* (Lotman 1990: 377).

Thus it is that Vico and Lotman have an identical point-of-departure in the study of human meaning-making — the imagination. In both, this is seen as a quality of mind that produces *poetic* forms that unite the verbal and nonverbal domains into a holistic *Gestalt* of interconnected meanings. This “dialogue” between Nature and the human mind, as Lotman so often called it, is the fundamental form of human cognition. It constitutes, as Vico termed it, a *poetic wisdom* that is found throughout time and across cultures.

Ingegno

Given the role of *fantasia* or *energeia* in spurring the human mind to create its own world of thought, the question becomes: How does one go from imagining to actually producing signifying structure? For Vico, as I read him, the answer is to be found in a second unique ability of human mentation — the *ingegno* “ingenuity”, “invention”, the faculty of the conscious mind that organizes the poetic forms produced by the *fantasia* into meaningful structures. Whereas the *fantasia* is an epiphenomenal product of brain activity, linking body and mind, the *ingegno* is a derivative of the *fantasia* — a kind of “epi-epiphenomenal” activity, stimulating the mind to carry out its creative handiwork. It is thus not connected directly to neural processes, operating totally within mental space as it configures and creates models of world events. “Making sense” is a product of the *ingegno* as it imposes pattern onto the images that the *fantasia* creates in mind-space. The brains of all animals have the capacity to form memorable im-

ages. This is a survival function. But animals lack the ability to transform their images into invented structures. This inheres in the agreements or resemblances that the human mind alone is capable of making between the images produced by the brain and their corresponding sensory units as registered by the body. As Vico phrases it: "The human mind is naturally inclined by the senses to see itself externally in the body" (Vico 1984 [1725]: 236).

The *ingegno* is, therefore, the source of syntax in language and of narrative structure in verbal discourse. It was at the creative nucleus of the earliest myths that humanity literally *invented*. Laws, scientific theories, fictional narrations, etc. are all traceable to the ability of the *ingegno* "to beget" — the word *ingegno* derives from Latin *in* "in" + *gignere* "to beget". Whereas *fantasia* corresponds to what Charles Peirce (1839–1914) called *firstness*, then *ingegno* corresponds instead to what he called *secondness*. The same view is found in Lotman. For the Estonian semiotician, the ability to make purely invented models of the world is a derivative of the fundamental creative energy of the human mind. This is accomplished by an innate ability to shift from primary *poetic* modeling to secondary more abstract modeling. This produces *textuality* in human affairs, an interconnected form of representation that bestows a sense of wholeness and unity upon signification. Lotman (1990: 138) puts it as follows: "The entire space of the semiosphere is transected by boundaries of different levels", which in turn create "a multileveled system".

It is within such a multileveled system that *symbolic* activity thrives, transforming human consciousness into one that is no longer only attentive to sensible properties and to spatiotemporal and relational patterns, but also to all kinds of referents (actual and potential) in and of themselves within the confines or *boundaries* of the semiosphere, as Lotman calls them. Symbolicity is what creates cultural textuality. Drawings, narratives, theories, conversations, etc. are thus all interconnected symbolically, displaying similarities in structure, signification, and referentiality. Texts incorporate the structural properties of the symbols with which they are constructed, and deliver conceptually equivalent meanings. This allows people to envision distinct bits of information and real-world phenomena as integrated wholes, rather than as disparate elements of consciousness.

Memoria

The final question that Vico asks is: How do we remember the meaningful signifying structures that the *fantasia* brought into existence in the first place? Vico answers this question with the notion of *memoria* — the faculty of mind that can detect the latent and original meaning structures of forms by simple exposure to them. This innate “sense of and for meaning” is not conscious, but embedded in the *fantasia* itself. Memory is thus a form of imagination itself. The creative imagination, or *fantasia*, is the faculty that allows us to convert our sense impressions into images; the *memoria* is the faculty that makes these images part of the very structure of the human brain. Thomas Sebeok (1987) aptly characterizes the operation of this level of mind as an “affective modeling of knowledge”. Susanne Langer (1948) has convincingly argued that, at this level of cognition, we recall the world through “feeling”, i.e. we “feel” that the world has a structure. It is at this mnemonic level that one can talk of “imaginative universals”, as Vico calls them (Verene 1981: 65–95, Mooney 1985: 227–230). These are connected to each other through the medium of metaphor, which is itself the handiwork of the *ingegno*. The particular characteristics of this metaphorically-fabricated mental universe constitute the source of differences among persons and among cultures. Although it evolved out of the *fantasia*, it has come to be the dominant form of mentality.

For Vico *metaphor* is a mental capacity that results from the interaction of the *fantasia* and the *ingegno*. As these two deep-level faculties perform their functions *in tandem*, they generate *metaphor*, which can be defined as a kind of epiphenomenal amalgam of *fantasia* and *ingegno*. For Vico metaphor is, therefore, a feature of the mind, not of language. It does, of course, surface constantly in discourse in the form of verbal metaphors and other verbal tropes (Lakoff and Johnson 1980, 1999, Gibbs 1994, Goatley 1997); but it can also manifest itself in other ways, such as in visual representational media (e.g. Winner 1982, Hausman 1989).

Vico referred to the operations of the metaphorical mind as *poetic logic*. He called the first speakers “poets”, which etymologically means “makers”. He defined metaphor as a “fable-making” capacity emerging from poetic logic that creates likenesses among percepts and perceptual models to create new, and therefore, context-free, associa-

tions. In this new world of the mind even “inanimate bodies” can be brought to life:

All the first tropes are corollaries of this poetic logic. The most luminous and therefore the most necessary and frequent is metaphor. It is most praised when it gives sense and passion to insensate things, in accordance with the metaphysics above discussed, by which the first poets attributed to bodies the being of animate substances, with capacities measured by their own, namely sense and passion, and in this way made fables of them. Thus every metaphor so formed is a fable in brief (Vico 1984: 404).

Phylogenetically, the metaphorical capacity emerged to convert images of the *fantasia* into memorable concepts. The primordial function of metaphor inhered in what Verene (1981) calls an “isness” relation. Traditionally, metaphor is understood as being tied to analogy, i.e. as finding something to be “like” something else. For Vico, on the other hand, the primordial operation of the metaphorical capacity creates an “isness” among things. Vico claimed that *Jove* was the first name created by humans as they became conscious of the first thundering sky (Vico 1984 [1725]: 374–384). Once this sky was called *Jove*, all other experiences of the same phenomenon can be “found again” in this name. *Jove* is, as Verene (1981) points out, our first imaginative universal, and thus a part of *memoria*. Something had come into existence, and this led to a conscious separation of the sky from the earth, of the divine from the world. From their common perception of *Jove* the first conscious humans learned to make sense together. Without the power of the *fantasia*, all could have quickly lapsed back into nothingness.

As metaphorized concepts become more and more removed from their deep-level origins, settling into their new memory system, they generate highly abstract structures *on their own*. Free from sensory control, these structures gradually come to dominate purposeful thinking. The mind’s cognitive system is a truly powerful one. It can be projected onto the external world of reality to partition it, organize it, classify it, and explain it. These projections of the mind have produced our symbolic and cultural systems — our institutions, scientific theories, laws, etc. The structure of these systems, therefore, can be used to investigate the structure of our *memoria*. This is Vico’s *verum-factum* principle, which posits that we can know only what we ourselves have made (e.g. Mondolfo 1969, Garin 1972, Verene 1981: 36–64). Vico’s motivation for this notion comes from his observation that: “the world of civil society has certainly been made by men, and

that its principles are therefore to be found within the modifications of our own human mind” (Vico 1984 [1725]: 331). Vico warns us throughout the NS that we must never forget how our dominant abstract mode of conceptual thinking originated, and that we should not ignore the fact that we continue to rely on our imagination when our abstract mind fails us: “For when we wish to give utterance to our understanding of spiritual things, we must seek aid from our imagination to explain them and, like painters, form human images of them” (Vico 1984 [1725]: 404).

If there is any notion in Lotman that, to my mind, is totally isomorphic with the Vichian *memoria* it is his very definition of culture as a *text*, which is, in effect, one huge collective *memory system*, displaying all the properties of neurological memory. *Memoria*, which corresponds to Peircean *thirdness*, is “dialogical” in the sense that it unfolds as an inner dialectic between individual and history. As an example, consider the use of the *rose* as a symbol for *love* in Western culture. It originated in the imagination as a way of understanding the feeling of love because its physical features [sweet smell], [red color], [plant], are perfect forms for coming to grips with this emotion. As this form passed into *memoria* it now stimulates a constant dialogue as to what it entails in signifying terms. In effect, this symbol “generates an *image* of the historical past, which culture transfers into the past and which, like an equal partner in a dialogue, affects the present” (Lotman 1990: 272).

The cultural cycle

It is in Book Four of *The New Science* where Vico develops his theory of the *corso* of history in terms of the three ages — the “divine”, the “heroic”, and the “human”. He portrayed each age as manifesting its own particular kind of customs, laws, language, and even human nature. He did not, however, see this historical sequence as necessarily irreversible. So, in Book Five, he elaborated the idea of the *ricorso*, the return of an earlier age in the life of a culture. The course of humanity, according to Vico, goes from a poetical nature, through a heroic one, to a rationalistic one. Each age has its own kind of mentality and language. The poetic mentality, for instance, generates myths; the heroic one, legends; and the rational one, narrative history. Rationality, according to Vico is humanity’s greatest achievement. But, unlike

Cartesian philosophers, he did not see it as an innate “given”. He considered to be a point-of-arrival, that was achievable only in a social ambiance. Human beings do not inherit rationality from their biological legacy. Stripped of culture, which is a collective *memoria*, human beings would be forced resort to their poetic, or corporeal, imaginations to make sense of the world all over again.

Vico thus proposed a cyclical theory of human cultural evolution, according to which human societies progress through a series of stages from barbarism to civilization and then back to barbarism. The term “barbarism” in Vico refers simply to a primitive stage of civilization. In the first stage — which he called the “age of the gods” — religion, burial rites, the family, and other basic institutions emerge to lay the foundations of human culture. He called this primordial phase of humanity the age of the “gods”, because he saw the first reflective humans as being filled with fear of natural phenomena such as thunder and lightening. Not possessing the knowledge to understand or “explain” such environmental events, the first humans ascribed them to awesome and frightful “gods” or “divine” creatures — hence the designation “age of the gods”. In the succeeding “age of heroes”, a dominant class of humans — the “heroes” of the evolving culture — emerges typically to subjugate the common people. These are beings with great physical prowess who inspire fear and admiration in the common people. The latter typically ascribe divine powers to these “nobles”. After a period of domination, a third stage — the “age of humans” — invariably takes shape in which the common people rise up and win equality; but in the process society begins to disintegrate as it returns to a more vile and violent form of barbarism (rational or reflective barbarism). This, according to Vico, is the natural “course” of human civilized cultures — a course that is not linear and endlessly progressive, but cyclical and finite. Cultures are born and cultures die. They do not go on forever.

The key to understanding cultural evolution is language, because it constitutes the primary mental means by which humans encode their thoughts and, therefore, can come together in order to help us think collectively. By studying the language of the people living during a specific age, Vico claimed, the scientist should be able to reconstruct the *forma mentis* of that people. This was, of course, Lotman’s pivotal view as well. Indeed, he compared culture to a linguistic system, a kind of “outer reflection” of the structural properties of linguistic systems. Like Vico, Lotman also saw the first form of language as highly

poetic (iconic). It is only in cultural contexts that humans speak a vernacular, literal language.

Vico argued for this three-stage historical progression primarily on the basis of the etymology of our common word-concepts. He persuasively demonstrated that words start out as concrete, iconic *Gestalten* based on our perceptions of the referents. Then *metaphor* — the innate universal ability to make connections among referents—transforms this sensorially-based meaning-universe into a conceptual one: i.e. one in which the referents of iconically-formed words are connected into generalized ideas. Finally, as cognition becomes increasingly more conceptual through the workings of the metaphorical capacity, the referents of the word-concepts also become increasingly more abstract and removed from their perceptual origins. Lotman, too, showed that the study of history is essentially a study of the meaning structures that result from a semiosis between body, mind, and culture across time.

Semiotics as a science of the imagination

In my view, the integration of Vico and Lotman will allow semiotics to develop a truly powerful investigative method for unraveling one of the greatest conundrums of all time: How did the mind, language, and culture come into existence? Their search for an answer to this riddle led each one, in his own way, to what is arguably the most important discovery of all time — the “poetic mind”. And, as with many of their ground-breaking ideas, it is only in recent times that this notion — called the “savage mind” by Lévi-Strauss (1962) — has started to receive widespread attention.

Lotman has already led the way in transforming semiotics into a “science of the imagination”. But his view of scientific inquiry still creates problems among Western scientists for the simple reason that, in Western culture, the term *science* has always been synonymous with the “objective” knowledge of “facts” of the natural world, gained and verified by exact observation, experiment, and ordered thinking. The starting point for scientific objectivism is Ancient Greece, when, ever since Aristotle, Western science has come to embrace the idea that the physical universe is a great machine operating according to natural laws. Aristotle laid the foundations for the experimental investigation of matter by claiming that these laws were determinable ob-

jectively by human reason. The term *science* in a Vichian-Lotmanian framework would have nothing to do with this traditional notion. For both scholars, we can know only what we ourselves have made, including *science*. The “laws” of Euclidean geometry, for instance, are not present in the universe in the way that we have specified them. Rather, they constitute humanity’s cognitive strategy for organizing and rationalizing our visual perceptions of space.

Anything that humans have themselves made, and institutionalized culturally, can be designated as “artifactual”. The object of a semiotics, as Lotman has showed, is to study the artifactual world, for it is through an investigation of all kinds of human “artifacts”, from myths to languages, that the nature of human thought will reveal itself. When we strip the mind of its rationalized symbols and codes, then we are left with a form of perception and memory generated by a primordial *fantasia*. This produces a language that is grounded on concrete modes of thought and perception that reverberate constantly in the corners of the mind. As Verene (1981: 123) has observed, Vico claimed that thunder, for instance, must have had a traumatic effect on the emerging consciousness of our hominid ancestors. That effect is being “sounded” over and over in the deepest layers of our modern minds in our symbols and other artifacts.

This radically new way of thinking about science has substantial implications and ramifications for semiotics and the other human sciences, and can constitute a common grounding and unifying foundation for them in the future. The Vichian-Lotmanian model of mind offers concrete suggestions for drafting a research agenda that contains the following essential components:

- The essence of mind is the *fantasia*. Access to this feature can be gained by studying the products of the mind’s poetic structure.
- The *ingegno* is the faculty that allows humans to express their *fantasia*. It is the source of metaphor, myth, and all the other products of human sense-making.
- The *memoria* is the *textuality* that emerges from this interplay between imagining and making of meaning.
- The signifying structures that we use in daily life (signs, texts, etc.) are end results of imaginative thinking.

Such agendas are actively being pursued by some contemporary scientists of the mind. The research on metaphor mentioned above (e.g. Lakoff and Johnson 1980, 1999) is a case-in-point. This goes

contrary to the traditional view of mind as an information-processing device — a view that has led the human and cognitive sciences astray, away from a deeper understanding of the mind as a creator of meanings. Literature and myth, not artificial experimental studies, put on display our conceptions of ourselves and of the mental world which we have created for ourselves. These products reveal a form of thinking that gives pattern and continuity to human experience.

As Peirce (1931–1958, 1: 538) cogently argued, “Every thought is a sign”. But, as he also wrote, “Not only is thought in the organic world, but it develops there” (Peirce 1931–1958, 5: 551). The relatively simple, nonverbal models that animals produce are natural forms that must fit “reality” sufficiently to secure the survival and “sanity” of the members of a species in their ecological niche. In human beings, however, the making of models transcends mere survival functions. And it is so pervasive and powerful that it often becomes very sophisticated indeed in the adult life of some individuals, as borne out by Einstein’s testimonial, or by what we know about Mozart’s or Picasso’s ability to model intricate auditory or visual referents in their heads in anticipation of transcribing them onto paper or canvas. Language, symbols, art works, scientific theories, etc., as far as we know, are unique to anthroposemiosis. These make it possible for humans not only to represent immediate reality, but also to frame an indefinite number of possible worlds. The imagination-based modeling capacity in humans has led to what Bonner (1980: 186) calls “true culture”, requiring “a system of representing all the subtleties of language”, in contrast to “nonhuman culture”. It is on this level, defined as *tertiary*, that nonverbal and verbal sign assemblages blend together in the most creative modeling system that Nature has thus far produced. To study this modeling system meaningfully, it is necessary to start with an investigation of the imagination itself for, as Vico and Lotman showed, it is the creative source of all the *energeia* that constitutes human mental and expressive activities.

References

- Bedani, G. L. C. 1989. *Vico Revisited: Orthodoxy, Naturalism and Science in the “Scienza Nuova”*. Hamburg: Berg.
- Bergin, T. G. and Fisch, M. 1984. *The New Science of Giambattista Vico*. Ithaca: Cornell University Press.

- Bonner, J. T. 1980. *The Evolution of Culture in Animals*. Princeton: Princeton University Press.
- Cáceres Sánchez, M. 1999. Scientific thought and work of Yuri Lotman. *Sign Systems Studies* 27: 46–59.
- Cornwell, N. 1992. Lotman's semiosphere. *Irish Slavonic Studies* 13: 163–167.
- Danesi, Marcel 1993. *Vico, Metaphor, and the Origin of Language*. Bloomington: Indiana University Press.
- Danesi, Marcel and Perron, Paul 1999. *Analyzing Cultures: A Handbook and Reference Manual*. Bloomington: Indiana University Press.
- Garin, E. 1972. Ancora sul 'verum-factum' prima di Vico. *Bollettino del Centro di Studi Vichiani* 2: 59–61.
- Gibbs, R. W. 1994. *The Poetics of Mind: Figurative Thought, Language, and Understanding*. Cambridge: Cambridge University Press.
- Goatley, A. 1997. *The Language of Metaphors*. London: Routledge.
- Hausman, C. R. 1989. *Metaphor and Art*. Cambridge: Cambridge University Press.
- Ivanov, V. V.; Lotman, J. M.; Pjatigorski, A. M.; Toporov, V. N. and Uspenskij, B. A. 1998. *Theses on the Semiotic Study of Cultures*. Tartu: University of Tartu.
- Kristeva, Julia 1994. On Yuri Lotman. *PMLA* 109: 375–376.
- Kull, Kalevi 1998. Semiotic ecology: Different natures in the semiosphere. *Sign Systems Studies* 26: 344–369.
- 1999. On the history of joining *bio* with *semio*: F. S. Rothschild and the biosemiotic rules. *Sign Systems Studies* 27: 128–137.
- 2000. Organisms can be proud to have been their own designers. *Cybernetics and Human Knowing* 7: 45–56.
- Lakoff, G. and Johnson, M. 1980. *Metaphors We Live By*. Chicago: Chicago University Press.
- 1999. *Philosophy in the Flesh: The Embodied Mind and Its Challenge to Western Thought*. New York: Basic.
- Langer, S. K. 1948. *Philosophy in a New Key*. New York: Mentor Books.
- Lévi-Strauss, C. 1962. *La pensée sauvage*. Paris: Plon.
- Lotman, J. and Uspenskij, B. A. 1973 (eds.). *Ricerche semiotiche*. Torino: Einaudi.
- Lotman, J. and Uspenskij, B. A. 1978. On the semiotic mechanism of culture. *New Literary History* 9: 211–232.
- Lotman, J. M. 1977. Primary and secondary communication modeling systems. In: Lucid, D.P. (ed.), *Soviet Semiotics*. Baltimore: The Johns Hopkins University Press. 95–98.
- Lotman, Y. 1980. *Testo e contesto: Semiotica dell'arte e della cultura*. Bari: Laterza.
- 1990. *The Universe of the Mind: A Semiotic Theory of Culture*. Bloomington: Indiana University Press.
- 1994. *Cercare la strada. Modelli della cultura*. Venezia: Marsilio.

- Mandelker, A. 1994. Semiotizing the sphere: Organicist theory in Lotman, Bakhtin, and Vernadsky. *PMLA* 109: 385–396.
- Mondolfo, R. 1969. *Il "verum-factum" prima di Vico*. Napoli: Guida.
- Mooney, M. 1985. *Vico in the Tradition of Rhetoric*. Princeton: Princeton University Press.
- Peirce, C. S. 1931–1958. *Collected Papers*. Cambridge, Mass.: Harvard University Press.
- Sebeok, Thomas A. 1987. In what sense is language a “primary modeling system”? In: Broms, Henri and Kaufmann, R. (eds.), *Proceedings of the 25th Symposium of the Tartu–Moscow School of Semiotics*. Helsinki: Arator, 67–80.
- 1990. *Essays in Zoosemiotics*. Toronto: Toronto Semiotic Circle Monograph Series.
- 1994. *Signs: An Introduction to Semiotics*. Toronto: University of Toronto Press.
- 1998. The Estonian connection. *Sign Systems Studies* 26: 20–41.
- Sebeok, Thomas A. and Danesi, Marcel 2000. *The Forms of Meaning: Modeling Systems Theory and Semiotics*. Berlin: Mouton de Gruyter.
- Sonesson, Göran 1998. The concept of text in cultural semiotics. *Sign Systems Studies* 26: 83–114.
- Torop, Peeter 1998. Semiotics in Tartu. *Sign Systems Studies* 26: 9–13.
- 1999. Cultural semiotics and culture. *Sign Systems Studies* 27: 9–23.
- Uexküll, Jakob von 1909. *Umwelt und Innenwelt der Tierre*. Berlin: Springer.
- Verene, D. P. 1981. *Vico's Science of Imagination*. Ithaca: Cornell University Press.
- Vico, Giambattista 1984 [1725]. *The New Science*. Transl. from the 3rd ed. [1744] by T. G. Bergin and M. H. Fish. Ithaca: Cornell University Press.
- Winner, E. 1982. *Invented Worlds: The Psychology of the Arts*. Cambridge, Mass.: Harvard University Press.

Заметки о Вико и Лотмане: семиотика как “наука воображения”

Итальянский философ Джамбаттиста Вико предвосхитил многие идеи, которыми питаются современные когнитивные и гуманитарные науки. Подчеркивая роль воображения в производстве значений, Вико показал всю выразительность первых форм репрезентации. Его оценка этих форм как “поэтических” привлекла серьезное внимание только сейчас, когда все большее число лингвистов и психологов начинают осознавать роль метафоры в порождении абстрактных систем репрезентации. Юрий Лотман придерживался сходных взгля-

дов, подчеркивая важность поэтического воображения в порождении текстуальности, связующей воедино культуру. Сравнение этих двух выдающихся мыслителей никогда не проводилось. Именно оно является целью данной заметки. В ней предприняты первые шаги по выявлению параллелизма мышления и метода основных работ этих двух новаторов. Такое сравнение создаст теоретическую основу превращения семиотики в настоящую “науку воображения”. Оно покажет, что семиозис и репрезентация связаны не с какими-либо врожденными нейромеханизмами, но с творческой тенденцией “самоизобретения”, присущей человеческому роду.

Vico ja Lotman: semiootika kui “kujutlusteadus”

Itaalia filosoof Giambattista Vico oli paljude tänapäeval kognitiivsetes ja humanitaarteadustes käibivate ideede eelkäijaks. Rõhutades kujutlusvõime tähtsust tähenduse tekitamises, näitas Vico esmaste representatsioonivormide olulisust, määratledes neid kui “poetilisi”. Alles kaasajal, kui üha suurem hulk lingviste ja psühholooge teadvustavad metafoori osa abstraktsete representatsioonisüsteemide loomisel, on hakatud sellesse vaatesse tõsisemalt suhtuma. Ka Juri Lotman oli sarnasel seisukohal, kriipsutades alla poetilise kujutlusvõime olulisust kultuuri siduva tekstuaalsuse genereerimisel. Neid kahte väljapaistvat mõtlejat ei ole kunagi võrreldud ja see ongi meie artikli eesmärgiks. Tuuakse välja paralleelism nende kahe novaatori mõtetegevuses ja meetodis. Selline võrdlus loob teoreetilise aluse semiootika muutmisel tõeliseks “kujutlusvõime teaduseks” ja näitab, et semioosist ja representatsiooni ei seo kaasasündinud neuromehhanismid, vaid inimloomusele omased loomingulise “ene-seleiutamise” tendentsid.

**Интерсемиотическое пространство:
Адрианополь в Петербурге
“Преступления и наказания”
Ф. М. Достоевского**

Пеэтер Торон

Dept. of Semiotics, University of Tartu,
Tiigi 78–312, Tartu 50410, Estonia
e-mail: toron@ut.ee

Abstract. **The intersemiotic space: Adrianopol in F. Dostoevsky’s “Crime and punishment” St. Petersburg.** The article focuses on the peculiarities of the intertextual space of culture and the means of its analysis. Level analysis, compositional analysis and chronotopical analysis are juxtaposed in the paper. Textual and intertextual chronotopical analyses are considered separately. Two aspects of textual processuality are juxtaposed: the history of text production and the role of the manuscript page structure as a reflection of the writer’s style and mode of thinking (especially in the intersemiotic relationship between picture, drawing and word); the history of text reception, its intersemiotic translation into different sign systems and its existence in culture in a scattered state. In this connection the notions of the individual and mental text are juxtaposed. As an example a page of F.Dostoevsky’s notebook is taken, where an intricate combination of picture, calligraphy and text offers an interesting information on the methods of formation of text conception.

Отдельная страница черновой рукописи писателя, на которой узнаваемы фрагменты предложений, формулировки идей, схемы, рисунки, каллиграфически написанные слова, подчеркивания, зачеркивания и разные условные знаки, нанесенные на эту страницу в разные времена, разными чернилами и без всякой продуманной последовательности — это одновременно автономный

текст, отражающий тип мышления писателя, и процессуальный текст творчества, отражающий этап на пути от замысла до напечатанного текста.

В современной культуре мы часто уже не имеем некомпьютерных рукописей, но процессуальность текста остается. В случае традиционных рукописей мы можем их элементы сопоставлять с аналогичными элементами рукописей других писателей. В итоге получим возможность сравнения именно структурных элементов рукописного листа: черновой текст как возможный мир будущего полного текста; условные знаки (символы, подчеркивания и т.п.), каллиграфия и рисунки как информация о типе творческого мышления данного автора. Мы можем этот материал интерпретировать как универсальные элементы рукописей практически всех писателей и тогда информативно и отсутствие какого-то элемента (например, при сопоставлении рисующих и нерисующих писателей), или же можно страницу рукописи анализировать как временно-пространственную структуру, где интерпретации подлжит вербально-визуальное целое.

Аналогом такого рукописного листа является вся культура. Ведь рукописный лист — это пространство одновременного сосуществования разных элементов или проявления одного замысла или возможного мира этого замысла. Приведем ряд примеров. В рукописях Ф. Достоевского на ранних этапах встречаются одновременно на одном листе рисунок (часто портрет), каллиграфически написанные имена и сам черновой текст, причем именно в приведенном порядке лист обычно и заполнен. Если в данном случае вербальное и визуальное отражают соотношение разных аспектов мыслительных процессов, результатов которых будет все же только вербальный текст, то логически (в сторону эксплицитности) следующим примером может быть издание вербального текста с собственными иллюстрациями автора. Понятно, что в таком случае картина дополняет слово и является органическим и эксплицитным элементом стиля. Следующим может быть художник-иллюстратор, имитирующий в иллюстрациях стиль рукописных рисунков писателя. Далее будет обычная ситуация книжного искусства, когда иллюстрация, с одной стороны, вступает в диалог с вербальным текстом, но, с другой стороны, входит в дискурс иллюстративного искусства своего времени и вступает в диалог с графической или живописной традицией. Частным случаем

является ситуация соприкосновения двух совершенно разных стилей, например, в случае диалога реалистического писателя (стиля текста) и футуристского художника (стиля иллюстраций). Другим частным случаем является иллюстрирование разностильной или многомирной книги, где, например, разным социальным мирам соответствует в иллюстрациях и разный графический язык.

Все эти примеры указывают на взаимосвязь между визуальным и вербальным в рамках одной страницы или одной книги. Но можно пойти дальше и сопоставить книгу и ее экранизацию по этой книге. Книга и экранизация в виде видеокассеты могут, конечно, стоять вместе на полке. Но в культуре они чаще всего разъединены. То же касается театральной инсценировки по данной книге. Даже если мы назовем экранизацию или инсценировку интерсемиотическим переводом вербального художественного текста, мы не можем в рамках культуры говорить с полной уверенностью о подлиннике и переводе. Легко установить отношения первичности — вторичности романа и его иллюстраций в рамках одной книги. В рамках всей культуры роман же существует вместе с разными метатекстами, внедряющими его в культуру. В их число входят наряду с иллюстрациями, экранизациями и инсценировками и аннотации, рецензии, разного типа рекламные тексты, школьные уроки и т.д. В семиотическом смысле все эти тексты являются переводами, но в то же время и они сами могут стать подлинниками или же знакомство с подлинником может начаться с любого вторичного текста. Эти тексты, представляющие разные меди и дискурсы, в сумме отражают особенности существования данного текста в культуре. Таким образом, текст существует в культуре как сумма своих трансформаций или переводов, причем в разных процессах рецепции актуализируется разная часть этих текстов. Тем самым текст превращается из конкретного материального артефакта в абстрактное ментальное целое, допускающее очень разные интерпретации и способное участвовать в разных семиозисах, то есть, становится интерсемиотичным.

Интерсемиотический аспект культуры вытекает из частичного совпадения знаков и языков (знаковых систем) разных искусств, во-первых, на уровне отдельного существования этих языков и текстов на них (например в случае театра и кино), во-вторых, на уровне ментальной интерференции, существования отдельного текста одновременно в виде разного типа текстов (роман, фильм,

спектакль, картина и т.д.), в-третьих, на уровне проекции текста на пресуппозиционный текстовый или интертекстовый фон. Для описания интерсемиозиса культуры важно помнить о необходимости узнавания знаков и о том, что узнавание это происходит не только в процессе рецепции целостных текстов-сообщений, но и во фрагментарных процессах перцепции. В интерсемиозисе культуры осмысливание и иерархизация знаков зависит не только от текстов — одни и те же знаки могут входить не только в состав разных текстов, но и знаковых систем и, таким образом, иметь в разных системах разные значения. На понимание механизмов перцепции в культуре опирается понимание интерлингвистичности, интертекстуальности, интердискурсивности и интермедийности, то есть интерсемиозисности онтологии знаков отдельных текстов культуры.

В конкретных и даже очень сложных текстах можно узнать **априорные знаки**, то есть общеизвестные знаки культуры, входящие в долгосрочную память культуры и понятные в процессе восприятия даже в случае актуализации одного значения из нескольких возможных. Часто это конвенциональные фоновые или пресуппозиционные знаки. На фоне этих общеизвестных знаков бросаются в глаза **процессуальные знаки**, участвующие в смыслопорождении и концептуализирующие текст. Это авторские знаки *ad hoc* — уникальные для данного конкретного текста, или для всего творчества (творческого метода) автора. Естественно возможны ситуации переосмысления априорных знаков, превращение их в уникальные авторские знаки. Отдельно следует выделить еще **апостериорные знаки**, ролью которых является осмысление целого текста как жанровой или дискурсивной разновидности и превращение текста в автономный знак.

На эти функциональные типы знаков опираются соответствующие типы восприятия, причем в рамках культуры возможно говорить, с одной стороны, о текстовом восприятии как возможности разных прочтений одного и того же текста и, с другой стороны, о мета- или интертекстовом восприятии как чтении разных трансформаций текста в культуре в зависимости от доминирующей знаковой системы. Аудитивные, аудиовизуальные, визуальные и вербальные знаки (знаковые системы) по-разному передают особенности текста, но находятся с точки зрения культурного существования текста в отношениях комп-

лементарности, то есть, разные прочтения текста в данном случае оказываются “прочтениями” в разных знаковых системах.

Интерсемиозис и означает многократность восприятия. Культуру можно рассматривать как систему перечитывания и запоминания этих прочтений. Многие прикладные тексты культуры направляют воспринимающего на многократное интерсемиотическое восприятие. Простым примером является ежедневное чтение газеты. Первое прочтение газеты происходит под влиянием визуальной доминанты — это просмотр газеты по заголовкам и фотографиям, а также по рубрикам. Второе прочтение связано с ознакомлением со семиотическими признаками или рамками наиболее интересных статей, то есть, с чтением зачинов, графически выделенных фрагментов, концовок и подписей авторов. И только третье прочтение газеты связано со чтением полных текстов выбранных статей. Таким образом, одна газетная статья перечитывается с семиотической точки зрения несколько раз.

Если традиционное перечитывание романа является частью бесконечного диалога, в ходе которого он каждый раз открывается с новой стороны, то современное перечитывание этого же романа в культуре превращает диалог в интерсемиотический полилог, где роман перечитывается в форме фильма или театральной постановки. В полилоге текст открывается с новой стороны, общаясь с воспринимающим одновременно на нескольких знаковых системах, причем первым прочтением романа может стать визуальное восприятие экранизации или чтение рецензии. Парадоксально, что само чтение первоначального вербального текста романа может оказаться перечитыванием инсценировки или экранизации этого романа. Синхронические процессы восприятия в культуре смешивают порядок каналов восприятия и в результате перцептивное единство текста зависит от этих относительно случайных обстоятельств. Интерсемиотическое перечитывание сравнимо с интерсемиотическим переводом в смысле Р. Якобсона, понимаемым как интерпретация вербальной знаковой системы при помощи знаков других знаковых систем (Jakobson 1971, Торп 2000). Но одновременное существование разных интерсемиотических переводов вынуждает поставить вопрос не просто о перцептивном единстве восприятия в случае каждого отдельного перевода, но и о перцептивной неопределенности или искаженности в результате

смешения разных трансформаций одного текста. Как на уровне отдельного текста или его интерсемиотической трансформации, так и на уровне всего комплекса возможных трансформаций одного текста справедливы слова Н. Гудмана: “Концепция без перцепции пуста, перцепция без концепции слепа” (Goodman 1978: 6). Концептуализация и деконцептуализация (как и реконцептуализация) одинаково возможны в культуре и зависят от типа процессов автокоммуникации культуры, то есть, от того, каким образом осмысляются тексты, типы текстов и их трансформаций.

Кризис больших нарративов и нарративности вообще во многом имеет перцептивную основу. В соотносительности действительного и воображаемого, в идентификации действительности в имагинарном трудно стыковать увиденное определенным образом (*seeing as*) и видимое на самом деле (*actual seeing*: Kearney 1997: 191). В этом контексте по-новому поднимается вопрос наблюдателя или повествователя. В культуре повествуют и наблюдают не только люди, но и дискурсы и медиа в виде конкретных изданий, радиостанций или телеканалов и т.п. Таким образом, на фоне недоверяемого нарратива выделяется вопрос недоверяемого повествователя. Конечно же эту ситуацию нельзя смешивать с открытостью нарратива и имплицитностью повествователя как приемом поэтики. И в случае вербального, и в случае аудиовизуального сообщения недоверяемость повествователя означает необходимость различать (видимого) повествователя переднего плана и (скрытого) повествователя заднего плана, и в обоих случаях необходимо различие проверяемости и непроверяемости повествователя, что в свою очередь зависит от роли имплицитного автора в структуре текста (см. подробнее: Currie 1995).

Определение степени доверяемости или недоверяемости разных трансформаций одного текста лежит в основе их иерархизации и облегчает восстановление перцептивного единства существования текста в культуре.

Практический анализ текстов культуры, их интерсемиотичность в смысле одновременного существования в форме самых разных трансформаций посредством самых разных знаковых систем, приводит к проблеме сопоставления анализируемости отдельного текста и анализируемости текста в интерсемио-

тическом пространстве. В первом случае изучается построение текста, во втором случае трансформируемость текста.

Интерсемиотическое пространство является пространством интерсемиозиса, в котором элементы или знаки текстов могут быть интерпретированы одновременно при помощи разных знаковых систем и эта возможность нескольких типов синтаксических связей усложняет осмысление, установление значения каждого конкретного знака.

В интерсемиотическом пространстве необходим параметрический анализ текстов. Первым параметром является **материал** текста. В случае текстов, материалом которых является естественный язык, возможен уровневый анализ в логическом порядке от минимальных языковых единиц в сторону целого текста или наоборот. Языковые уровни составляют и иерархическую систему, поэтому симптоматично, что в семиотике был интенсивный период сведения многих языков культуры к типу построения естественного языка. Поиски фонем, морфем, слов и высказываний в языке кино или театра обогатили понимание специфики разных знаковых систем и трудностей их описания. Оказывается, что анализ материала нелингвистических артефактов приводит к описанию нескольких знаковых систем одновременно или к некоторому списку элементов, причем членение материала не является логическим и иерархические связи не вытекают из самого материала. Кадр фильма можно анализировать как фотографию или картину, но и как элемент монтажа, актуализацию плана или ракурса и т.д.

Гибкий переход от парадигматики к синтагматике достигается при помощи второго параметра, которым является **композиция**. Уровни материала отражают членимость текста на имманентные элементы, уровни композиции отражают типы связности элементов в линейном протекании текста как повествования. Параметр композиции охватывает и проблемы соотношения элементов минимальных единиц композиционного членения: кадр в фильме, сцена в театре или в живописи, мотив в литературе являются соединением или конфигурацией разных элементов.

Материал и композиция являются внутренними параметрами текста. Но культура как система текстов, с одной стороны, и текст как не только материальный артефакт, но и сумма или потенциал своих возможных трансформаций (то есть, текст как

множество разнотипных и разнородных текстов) нуждаются в сравнительном целостном анализе. Для анализа столь сложного объекта необходим внешний по отношению к материалу текста параметр. Таким внешним универсальным параметром является **хронотоп**. Именно параметр хронотопа соответствует нуждам анализа текстов в интерсемиотическом пространстве.

Хронотопный анализ стал после работ М. Бахтина вновь актуальным именно в связи с новым интересом к интерсемиотическому анализу. Универсальность этого анализа вытекает из автономного от материала текста структурирования текстов по сопоставимым критериям. Литература и экранизации легче поддаются сопоставительному анализу при применении понятия хронотопа (Тогор 2000). Независимое от материала текстов измерение целостности необходимо для избежания растворения текстов в культуре. Поэтому с целью целостности описания обращаются к понятию хронотопа в анализе фильмов с раздвоенным хронотопом и фильмов с нормальным хронотопом (Rosolowski 1996: 109). В хронотопный анализ органически включается социальный аспект, сближающий понятие хронотопа с другим бахтинским понятием карнавала (Gómez-Mogiana 1997–1998). И, кроме того, хронотопный анализ гибко учитывает возможность разного функционирования одних и тех же знаков на разных уровнях текста (Osadnik 1994). Наконец, хронотопный анализ включает и антропологический аспект и, например, уровни хронотопов сопоставимы с антропологическим описанием пространства личности, состоящего из телесно-предметного жилого пространства (*lived space*), личного психологического пространства (*personal space*) и связанного с потусторонним экзистенциального пространства (*existential space*: Etlin 1998).

Хронотопный анализ имеет две разновидности. Во-первых, **текстовый хронотопный анализ** или анализ индивидуального текста по хронотопным уровням. Во-вторых, **интертекстовый (интердискурсивный, интермедиаальный) хронотопный анализ** как анализ ментального текста, его множественности в культуре. Хронотопный уровневый анализ сопоставим с семиосферическим анализом. Если хронотопные уровни отражают универсальную семиотическую структуру текстов, то разные семиосферы различимы на основе градаций части и целого, своего и чужого:

Пронизанность семиосферы частными границами создает многоуровневую систему. Определенные участки семиосферы могут на разных уровнях самоописания образовывать семиотическое единство, некоторое непрерывное семиотическое пространство, ограниченное единой границей, или группу замкнутых пространств, дискретность которых будет отмечена границами между ними, или, наконец, часть некоторого более общего пространства, ограниченную с одной стороны фрагментом границы, а с другой открытую (Лотман 1996: 185–186).

Затронутые выше проблемы перцепции сопоставимы с семиотическим пониманием культуры и текста:

“Замкнутость” семиосферы проявляется в том, что она не может соприкасаться с иносемиотическими текстами или с не-текстами. Для того чтобы они для нее получили реальность, ей необходимо перевести их на один из языков ее внутреннего пространства или семиотизировать факты. Таким образом, точки границы семиосферы можно уподобить чувственным рецепторам, переводящим внешние раздражители на язык нашей нервной системы, или блокам перевода, адаптирующим данной семиотической сфере внешний для нее мир (Лотман 1992: 13).

Целью настоящей работы не является сопоставление понятий хронотопа М. Бахтина и семиосферы Ю. Лотмана, хотя между ними существует бесспорная связь. Нам важно подчеркнуть близость этих понятий как метаязыковых средств анализа интересемиотического пространства. В связи с понятием хронотопа нет четкого представления о его полной систематике и методологическом потенциале. Даже М. Холквист как один из виднейших исследователей наследия М. Бахтина вынужден признать, что хронотоп трудно поддается анализу (Holquist 1994: 109). В контексте настоящего подхода напомним о двух типах хронотопного анализа. Интертекстовый хронотопный анализ исходит из ментального текста, из текстовой множественности:

Произведение и изображенный в нем мир входят в реальный мир и обогащают его, и реальный мир входит в произведение и в изображенный в нем мир как в процессе его создания, так и в процессе его последующей жизни в постоянном обновлении произведения в творческом восприятии слушателей-читателей. Этот процесс обмена, разумеется, сам хронотопичен.../.../ Можно даже говорить об особом *творческом* хронотопе, в котором происходит этот обмен произведения с жизнью и совершается особая жизнь произведения (Бахтин 1975: 402–403).

Оставляя в стороне частные типы хронотопов в текстах, приведем одну позднюю (1970–1971) запись М. Бахтина, свидетельствующую о желании установления методологических рамок для осмысления проблем текстового хронотопного анализа:

Хронотопичность художественного мышления (особенно древнего). Точка зрения хронотопична, то есть включает в себя как пространственный, так и временной момент. С этим непосредственно связана и ценностная (иерархическая) точка зрения (отношение к верху и низу). Хронотоп изображенного события, хронотоп рассказчика и хронотоп автора (последней авторской инстанции) (Бахтин 1979: 338).

И соединяет эти высказывания рассуждение М. Бахтина о включении любого осмысливаемого явления в пространственно-временную и смысловую сферы:

... каковы бы ни были эти смыслы, чтобы войти в наш опыт (притом социальный опыт), они должны принять какое-либо временно-пространственное выражение, то есть принять *знаковую* форму, слышимую и видимую нами (иероглиф, математическую формулу, словесно-языковое выражение, рисунок и др.). Без такого временно-пространственного выражения невозможно даже самое абстрактное мышление. Следовательно, всякое вступление в сферу смыслов совершается только через ворота хронотопов (Бахтин 1975: 406).

Текстовый хронотопный анализ, позволяющий анализировать как отдельно, так и сопоставительно тексты, оформленные в разных знаковых системах, предполагает выделение оптимального количества хронотопных уровней. **Топографический хронотоп** охватывает уровень сюжета или изображения некоторого события или истории. **Психологический хронотоп** формируется под влиянием персонажных точек зрения и **метафизический хронотоп** определяет концепцию текста как типа соотношения этих трех хронотопных уровней. В своих исследованиях по творчеству Ф. Достоевского (Тороп 1997) мы соединили хронотопные уровни творчества Ф. Достоевского с его идеологическим думирием. В результате получилась работающая схема:

УРОВНИ	АНТРОПО- ЦЕНТРИЗМ	СЕМИОСФЕРА	ТЕОЦЕНТРИЗМ
топографический хронотоп гомофония	сюжет	мир знаков (знаковых предметов, имен, ситуаций, поступков)	архисюжет
психологический хронотоп полифония	самосознание	мир знаковых (само-) ощущений, переживаний, мыслей, слов персонажей	бессознание
метафизический хронотоп гетерофония	профанная идейность мир профан- ных текстов	мир гипертемы и идеологического ядра	сакральная идейность мир сакральных и сакрализо- ванных текстов

Приведенная схема является примером естественного соприкосновения хронотопного и семиосферического анализа и доказала свою продуктивность в анализе творчества Ф. Достоевского. Но в данном случае нам хочется в качестве примера проанализировать одну страницу из записной тетради Ф. Достоевского с записями к роману «Преступление и наказание».

В издании текстов Достоевского существует одна текстологическая проблема. На определенном предварительном этапе в подготовительных материалах к крупным произведениям появляются рукописные страницы, на которых сосуществуют записи разного типа. Прежде всего это заметки к романам (сюжетные ходы, характеристики персонажей и т.п.), где рядом с собственно текстом находятся каллиграфически написанные слова (чаще всего имена) и рисунки (часто портреты). Мне уже приходилось писать о структуре рукописного листа Достоевского, а также о том, что каллиграфия играет важную роль в формировании, а с точки зрения исследователя в понимании интертекстуального пространства романов Достоевского (Тороп 1997). В то же время издатели полного собрания сочинений (Достоевский 1972–1990) не считали каллиграфически написанные слова элементами

Страница озаглавлена: *Отметки о Свидригайлове*. После этого появляются рисунки (2 портрета, один из которых заштрихован) и каллиграфически написанные слова и фрагменты слов: Соня, Napoleon Buonaparte, Buonaparte, Istria, Capo d'Istria, Pozzo di Borgo. Последним этапом заполнения страницы является уже появление того текста, который нам известен по полному собранию сочинений:

Свидригайлов. Если б я был социалист, ну, конечно, остался бы жить. Остался бы жить, потому что было б что делать, — нет убежденнее народа, как социалисты. А ведь в жизни главное убеждение. Подите-ка, разубедите его. Да ведь он же чувствует, что весь жизненный материал потеряет. Для него главное — убеждение. А в чем его убеждение? Главная мысль социализма — это механизм. Там человек делается человеком механикой. На всё правила. Сам человек устраняется. Душу живу отняли. Понятно, что можно быть спокойным, — настоящая китайщина, и эти-то господа говорят, что они прогрессисты! Господи! Если это прогресс. То что же значит китайщина!

NB. Верите ли в будущее?
Много неверия.

Социализм — это отчаяние когда-нибудь устроить человека. Они устраивают его деспотизм(ом) и говорят, что это самая-то и есть свобода!

А чтоб он не очень куражился, то ужасно любят мнение о том, что человек сам одна только механика. (7: 161)

С методологической точки зрения у исследователя теперь несколько возможностей: во-первых, сопоставление всех каллиграфически написанных слов в материалах одного произведения и попытка их изучения в качестве единого текста; во-вторых, ассоциативное или концептуальное сопоставление каллиграфической и некаллиграфической частей каждого рукописного листа как целостного микротекста; в-третьих, сопоставление рукописного листа как целого с окончательным беловым текстом в рамках целостного возможного мира произведения.

Подготовительные материалы к “Преступлению и наказанию” допускают возможность всех трех подходов. Например, в общем списке каллиграфически написанных слов есть географические названия (Крит, Константинополь) и собственные имена (Менотти, Capo d'Istria, Pozzo di Borgo, Nero, Ariman, Arius, Caligula, Aaron, Raphael Santio d'Urbino и др.), которые могут

быть разделены на группы на основе идеологических или исторических доминант, т.е. допускают некоторую общую интерпретацию. В некоторых случаях ощутима прямая связь между каллиграфическим и некаллиграфическим. Например, на одной из страниц записных тетрадей, посвященной характеристике Свидригайлова, дается подробный список разных типов наслаждений, составляющих суть амбивалентности этого персонажа:

Непомерная и ненасытимая жажда наслаждений. Жажда жизни неутолимая. Многообразие наслаждений и утолений. Совершенное сознание и анализ каждого наслаждения, без боязни, что оно оттого ослабеет, потому что основано на потребности самой природы, телосложения. (7: 158)

Сопровождается же этот текст каллиграфическими именами Нерона, Аримана, Ария, а на следующей странице и Калигулы. Есть пример и устойчивой взаимосвязи каллиграфического и некаллиграфического. Например, имя Рафаеля упоминается несколько раз и всегда на страницах, посвященных Соне Мармеладовой.

Меня же интересует сопоставимость каллиграфических слов с целым текстом и осмысление трудно интерпретируемых мест в рамках возможного мира произведения. Уже указанная страница записной тетради под названием *Отметки о Свидригайлове* может послужить материалом. Одна возможность исходить из амбивалентности образа Свидригайлова и проследить эту амбивалентность в историческом интересубъективном пространстве, где рядом оказываются Наполеон Бонапарт и два видных деятеля антинаполеоновского движения. Карл-Андрей Поццо ди Борго родился на Корсике в один год с Наполеоном, был президентом государственного совета Корсики, затем ненавистником Наполеона и русским дипломатом, составившим в 1813 году прокламацию держав против Наполеона и его династии. Граф Иоанн Каподистрия родился на острове Корфу, но предки его родом из австрийского городка Капо д'Истрия, расположенного на скалистом острове Триестского залива и напоминающего Венецию. В 1813 году был связан с привлечением Швейцарии в движение против Наполеона, с 1816 по 1822 год был министром иностранных дел России, а в 1827 году был избран на семь лет президентом Греции. В 1831 году был убит.

На фоне истории наполеоновской династии становятся более осмысленными и некоторые мотивы в изображении Свидри-

гайлова. Если вспомнить про его вояж, упоминание путешествия в Америку, то в возможном мире “Преступления и наказания” оказываются и два Наполеона: Наполеон I, планировавший бегство в Америку, и Наполеон III, участвовавший в 1831 в Модене в заговоре Чиро Менотти, имя которого также зафиксировано каллиграфически, и высланный в 1836 году в Америку, где пробыл год.

Так как наполеоновская тема выражена в тексте достаточно эксплицитно, то такие проекции разных мотивов в романе на наполеоновскую историю реализуемы относительно легко.

Все такие возможности входят в общую почвенническую поэтику времени, в историческую симультанность, интертекстуальность и интересубъективность.

С временем неотрывно связано пространство. О топографии Петербурга в романах Достоевского много написано, но даже Н. Анциферов вынужден признать, что писатель иногда представлял архитектурные объекты, т.е. концептуализировал пространство. Исходя из конкретного рукописного листа хочется указать на некоторые признаки, о маркированности которых нет свидетельств и осмысление которых допустимо лишь в возможном мире произведения.

Поццо ди Борго и Каподистрия островитяне — вспомним роль островов в романном пространстве, с одной стороны, и отношение Свидригайлова к воде, с другой стороны. Кроме того, это два иностранца, служивших России. Имя Свидригайлова Аркадий этимологически означает человека из Аркадии. По типу построения имени он находится в интертекстуальном пространстве между Каподистрией и Иудой из Кариота. Сближение имен Аркадия Ивановича и Иоанна Каподистрии актуализирует греческую тему и создает возможность понимания амбивалентности Свидригайлова и сквозь призму этой темы. Менее случайным кажется на данном фоне упоминание Свидригайловым в разговоре с Раскольниковым одного события восьмилетней давности: “А все-таки посадили было меня тогда в тюрьму за долги, гречонка один нежинский.”(6: 218). Дополнительная возможность осмысления концептуальности эпизода последнего вояжа Свидригайлова, его пути на место самоубийства, возникает с появлением в романе несуществующей в тогдашнем Петербурге гостиницы “Адрианополь”:

Он шагал по бесконечному -ому проспекту уже очень долго, почти с полчаса, не раз обрываясь в темноте на деревянной мостовой, но не переставал чего-то с любопытством разыскивать по правой стороне проспекта. Тут где-то, уже в конце проспекта, он заметил, как-то проезжая недавно мимо, одну гостиницу деревянную, но обширную, и имя ее, сколько ему помнилось, было что-то вроде Адрианополя. Он не ошибся в своих расчетах: эта гостиница в такой глуши была такую видную точкой, что возможности не было не отыскать ее, даже среди темноты. (6: 388)

Напомним, что Каподистрия стал президентом Греции до и был убит после Адрианопольского мира 1829 года, гарантировавшего автономию Греции. Для Свидригайлова, человека из Аркадии, гостиница “Адрианополь” стала лишь временным убежищем. Из “Адрианополя” он направляется к другому “греку” — Ахиллу, перед которым и застрелится.

Таким образом, актуальные события романа, протекающие в конкретном времени и пространстве, помещаются Достоевским в возможный мир всемирного исторического процесса. Одни эпохи являются архисюжетной основой романа и нуждаются в осмыслении в интертекстуальном пространстве в качестве органических элементов поэтики романа. При помощи других эпох могут быть осмыслены отдельные эпизоды или черты персонажей. В нагнетании разных эпох можно увидеть почвенническую основу поэтики Достоевского — желание выделения универсальных процессов в истории, причем универсальность доказывается преемственностью имен, составляющих по словам А. Григорьева “душу процесса”. Поэтому к именам в творчестве Достоевского необходимо относиться внимательно, будь они в тексте или в черновике.

Этот краткий пример показывает аналогию между отдельным рукописным листом и культурой как системой разнородных текстов. Это два интерсемиотических пространства. Данный рукописный лист является целым текстом с точки зрения семиотической оформленности и места в истории романа “Преступление и наказание”. Каждый элемент текста (рисунок, каллиграфию, текст) можно атрибутировать отдельно. Но в той же мере важно атрибутировать взаимосвязи между элементами, так как имен Поццо ди Борго и Каподистрии в окончательном тексте нет. Хронотопная структура романа содержит целый ряд исторических и пространственных аллюзий. Действие романа происходит в Петербурге, но Аркадий Свидригайлов связан через

имя с Аркадией, собирается уехать в Америку, останавливается в Адрианополе, и одним из его прототипов является Иуда из Кариота. Проанализировав в интерсемиотическом пространстве рукописного листа процесс порождения концепции текста, мы можем реконструкцию этого процесса проверить на особенностях белого текста. Существование “Преступления и наказания” в интерсемиотическом пространстве культуры является бесконечным процессом рецепции, который может быть сопоставлен с процессом порождения и в результате можно проанализировать семиотические особенности существования этого текста в культуре, степень его трансформируемости или интерсемиотической переводимости.

Литература

- Бахтин, Михаил 1975. *Вопросы литературы и эстетики*. Москва: Художественная литература.
- 1979. *Эстетика словесного творчества*. Москва: Искусство.
- Достоевский, Федор 1972–1990. *Полное собрание сочинений в тридцати томах*. Ленинград: Наука.
- Лотман, Юрий М. 1992. О семиосфере. В книге: Лотман, Ю., *Избранные статьи Т. 1: Статьи по семиотике и типологии культуры*. Таллинн: Александра, 11–24.
- 1996. *Внутри мыслящих миров: Человек — текст — семиосфера — история*. Москва: Языки русской культуры.
- Тороп, Пеэтер 1997. *Достоевский: история и идеология*. Tartu: Tartu Ülikooli Kirjastus.
- Currie, K. 1995. Unreliability refigured: Narrative in literature and film. *The Journal of Aesthetics and Art Criticism* 53(1): 19–29.
- Etlin, R. A. 1998. Aesthetics and the spatial sense of self. *The Journal of Aesthetics and Art Criticism* 56(1): 1–19.
- Gómez-Moriana, A. 1997–1998. Triple dimensionalidad del cronotopos ba-jtiniano: Diacronía, diatopía, diastratía. *Acta poetica* 18/19: 153–188.
- Goodman, N. 1978. *Ways of Worldmaking*. Hassocks: The Harvester Press.
- Holquist, M. 1994. *Dialogism: Bakhtin and his World*. London: Routledge.
- Jakobson, Roman 1971. On Linguistic Aspects of Translation. In: Jakobson, Roman, *Selected Writings 2: Word and Language*. The Hague: Mouton.
- Kearney, R. 1997. The crisis of narrative in contemporary culture. *Metaphilosophy* 28(3).

- Osadnik, W. M. 1994. Some remarks on the nature and representation of space and time in verbal art, theatre and cinema. *S: European Journal for Semiotic Studies* 6(1/2).
- Rosolowski, T. A. 1996. The chronotopic restructuring of gaze in film. *Arizona Quarterly* 52(2): 103–138.
- Torop, Peeter 2000. Intersemiosis and intersemiotic translation. *S: European Journal for Semiotic Studies* 12(1): 71–100.

**Intersemiootiline ruum:
Adrianopol F. Dostojevski “Kuritöö ja karistuse”
Peterburis**

Artikkel on pühendatud intertekstuaalse kultuuriruumi eripärade ja analüüsivõimaluste otsimisele. Kõrvutatakse tasandi-, kompositsiooni- ja kronotoobilist analüüsi. Eraldi viidatakse tekstilisele ja intertekstilisele kronotoobilisele analüüsile. Vaadeldakse kaht teksti protsessuaalsuse aspekti: teksti saamislugu, käsikirjalehe struktuuri osa selles stiili ja kirjaniku mõtlemisviisi peegeldajana (eriti intersemiootilises pildi, graafika, sõna vahekorras) ja teksti retseptsioonilugu, tema intersemiootilist tõlkimist erinevate märgisüsteemide abil ja pihustunud kujul kultuuris eksisteerimist. Sellega seoses kõrvutatakse individuaalse ja mentaalse teksti mõistet.

Näiteks on toodud üks lehekülge F. Dostojevski taskuraamatust, millel pildi, kalligraafia ja teksti keeruline kooslus pakub huvitavat informatsiooni teose kontseptsiooni kujunemise viisist.

Text semiotics: Textology as survival-machine

Dinda L. Gorlée

Van Alkemadeaan 806, 2597 BC's-Gravenhage, The Netherlands
e-mail: dlgorlee@hetnet.nl

Abstract. Signifying practices by which living creatures communicate, are, according to Sebeok, the survival-machines. Accordingly, as represented by the semiotic text analysis or Bakhtin's textology, one can speak about a human survival-machine. This has been studied by different semiotic schools (including the Moscow-Tartu school) referring to language, culture, genre and, importantly, text ideology. In this article, the aspects of textology in Peirce's generalized theory of signs become analysed. After a discussion of the concept of text in Peirce's (published and unpublished) writings, its relationship with semiosis and other Peircean categories is shown. The project of elaborating Peirce-based text-semiotics expects that it must be dramatically different from other sign-theoretical text-theories. This may be a path towards more inter-subjective and creative textology.

Textology

The application of a semiotic paradigm to text analysis, which characterizes the analysis of written verbal utterances, also called text semiotics, is finally what distinguishes the formalized approach of text grammar from a more comprehensive point of view, that of communication in the broad sense of the term. Indeed, texts are objects or artifacts containing and conveying information; messages encoded, sent, transmitted, received, decoded, and given some interpretation¹.

¹ For text and textuality, see further Gorlée 1997a and 1998.

Semiotics in the broad sense is precisely concerned with the study of all signifying practices (verbal, non-verbal, or a combination of both) by which living creatures, human and non-human, communicate. How vital this pursuit is, has been repeatedly emphasized by Sebeok, who refers to it as life's, and thus also man's, "survival-machine" (Sebeok 1986: 5). In order to study the many different ways in which signs can function, semiotics has developed a fullfledged repertoire of concepts. Semiotics is therefore in the unique position to describe, explain, as well as to predict human thought as operative in the sign process. Moreover, a semiotic analysis does not peculiarly involve a value judgment, neither a priori nor a posteriori; because as the radically general theory of signs it is, at least in its purest form, incompatible with ideological discoloration of the facts it pretends to study.

Textual production and textual interpretation are, among innumerable other human practices, forms of communication through signs. The text-phenomenon can therefore be studied from the perspective of a theory of signs. Obvious as this may perhaps seem, a "semiotic textology" (Petöfi 1986b)² is nevertheless a relatively recent emprise within semiotics, and remains in many ways a little-explored field of applied semiotic investigation. One important reason for this is that text semiotics as it has so far been practiced has often concentrated rather one-sidedly on what is called linguistic semiotics, or descriptive sign theory in the Saussurean tradition. Examples abound³. Whereas, on the other hand, the semiotic project of a textology from the point of view of Peirce's semiotics has as yet received scant attention (Gorlée 1992).

Without going into the details of the sectarian "warfare" between followers of the two sign-theoretical traditions, the discussion here will concentrate instead on their respective relevance to the textological case in point. On the other hand, the insights as developed in the former Soviet Union, the Moscow-Tartu school, will also, whenever relevant, be drawn upon. Bachtin's novel textological propositions, from the Leningrad school of semiotics, has been mentioned in the previous paragraph, who rejected the Saussurean dichotomy of syn-

² The term "textology" was originally an invention of Bachtin's from the Leningrad school of semiotics. See his 1959-1961 article "Das Problem des Textes" (Bachtin 1990: 437-438, note 2 [composed by the translators]).

³ See *Linguistique et discours littéraire. Théorie et pratique des textes* by Adam, published in 1976, still in use. Jointly with Saussurean terms the following (always literary) texts are analyzed, for instance, Colette's *La maison de Claudine*, Chrétien de Troyes's *Perceval ou le Conte du Graal*, Flaubert's *Madame Bovary*, André Breton's *Poisson soluble*, Zola's *Germinal*, Montesquieu's *Lettres persanes*, and so forth.

chrony and diachrony and statics versus dynamics, as against the revival of post-Saussurian descriptive tradition in France (see Lévi-Strauss) and parts of North America. No attempts will therefore be made here to resolve semiotic disputes. It will instead be argued that Peirce's theory of signs has been unduly neglected in text theory, and that its potential for text-theoretical study fully deserves further exploration. To explore this well-nigh pristine ground will be the primary aim, and indeed the privilege, of this study.

Text semiotics

Different semiotic theories have defined the text by establishing a relation between the concept of text and that of sign. This does, however, not mean that there is agreement among semioticians about what precisely is a text. Indeed, what is meant by it varies according to the different definitions, explications, or descriptions given, explicitly or implicitly, to the concept of the (linguistic) sign.

In what has been denominated "linguistic semiotics", the written verbal sign is regarded as a graphic utterance-sign occurring as a sequence of word-signs, that is, as an "entity endowed with meaning ... , prior to any linguistic or logical analysis" (Greimas and Courtés 1982: 362). It is not until the object in question is analyzed (or described) that it becomes a signifying whole, or text. It is thus only as a result of the descriptive process of what is called "signification" that articulated meaning comes into existence and is made visible to the reader. This means that a text is "made up only of those semiotic elements fitting the theoretical goal of the description" (Greimas and Courtés 1982: 340). Different types of analysis will perceive different pertinent traits, will choose, retain, and process different signifying features, and will consequently produce different non-equivalent texts.

This sign-theoretical approach studies how the utterer (who in this predominantly literary-oriented tradition is often referred to as "narrator") addresses himself to the reader. As it concentrates on retracing the process in which meaning is encoded and textualized, linguistic semiotics is primarily concerned with text production, and hence with sign production. This agrees with Barthes's concept of the text (or Text, as he often called it), which hinges on the sign *qua* signifier; while its counterpart, the signified, can be endlessly explored (this is Barthes's "semiological adventure"), yet its true scope must remain

elusive. After making a round through textuality in his structuralist colleagues (Propp, Kristeva, Derrida, Foucault, Lacan, *Tel Quel*) as Barthes formulated his textness (originally in 1974):

And what is the Text? I shall not answer by a definition, which would be to fall back into the signified.

The Text, in the modern, current sense which we are trying to give this word, is fundamentally to be distinguished from the literary work:

it is not an esthetic product, it is a signifying practice;

it is not a structure, it is a structuration;

it is not an object, it is a work and a game;

it is not a group of closed signs, endowed with a meaning to be rediscovered, it is a volume of traces in displacement;

the instance of the Text is not signification but the Signifier, in the semiotic and psychoanalytic acceptance of that term;

the Text exceeds the old literary work; there is, for example, a Text of Life ... (Barthes 1988: 7)

In so far as the often cryptic nature of Barthes's idea-world and the daunting nature of his parlance do permit a transparent and unambiguous interpretation, a structuralist concept of text seems to de-emphasize what is central to other semiotic theories, namely that a text serves first and foremost a communicative target. Yet to conceive of a text as a self-contained entity with its own internal structure, independent (at least in principle) of whatever interpretations it may at any time be able to receive, is to ignore the almost obvious, namely that this structure or form is as it is precisely to efficiently organize and convey a particular message. Before anything else, a written text must therefore be considered as a communicative event, a writer's device for telling something to somebody, his particular reader(ship).

In non-structuralist semiotic theories, and in semiotic theories which, while bearing the stamp of Saussure, are not as directly Saussurean as structuralism is, communication does take central stage. In the former Soviet Union, this was clearly prefigured in the text-theoretical work by Jakobson and Bachtin, which focuses upon the (preferably artistic) verbal text *qua* individual utterance (written as well as spoken), and which is conceived as a polemical dialogue between Saussurean linguistics and "metalinguistics", the latter a Bachtinian concept (*not* coextensive with Jakobson's 1960 notion of meta-language) emphasizing the diachronical and cumulative aspects of

literary hermeneutics instead of the static nature of Saussure's model⁴. This marks the transition, in so-called Soviet semiotics, from a cybernetic and scientific approach to a cultural approach.

In the sense of the Moscow–Tartu school of semiotics, originally headed by Lotman, communication is approached as a fact of culture, and its manifestations, both linguistic and non-linguistic, are called, in consequence, “texts of the culture.” In his article “Problems in the typology of texts”, Lotman gives the following, deliberately broad characterization of the (linguistic) text:

A text is a separate message that is clearly perceived as being distinct from a “nontext” or “other text” ... The distinctive character of a text is not randomly distributed among semiotic levels. For a linguist, a sequence of sentences may be perceived as distinct from what precedes and follows in a linguistic relation, syntactically for instance, and thus as forming a text; and yet it may not possess such a delimitation according to certain legal standards. For a lawyer, a sequence of sentences is part of a text if it belongs to a broader unity, and is a nontext if it does not belong to such a unity. From this follows: ... A text has a beginning, end, and definite internal organization. An internal structure is inherent by definition in every text. An amorphous accumulation of signs is not a text. (Lotman [1977] 1988: 119)

Considered as a semiotic sign, the text is for Lotman a delimited whole. First, the text must have clear external boundaries, which set it apart from other texts in the same linguistic code. Second, and in addition to its outward demarcations, the text often has an inner distinctiveness, insofar as it consists of parts (strophes, chapters, paragraphs, etc.). The text is hierarchically organized in a variety of sub-signs corresponding to levels of structural-semantic organization, or subtexts⁵. In order to be understandable as a coherent unity, both in terms of form and in terms of meaning, texts must for Lotman be viewed as rooted in a given culture in its plurality of codes. As Shukman points out, the concept of “code,” “in Lotman’s usage, may refer to semantic level, literary convention, level of consciousness or ideology. Used in this way, it is a heuristic device not strictly or ideologically defined” (Shukman 1986: 1088). What is important here is not so much how texts are interpreted (because widely divergent in-

⁴ See, e.g., Bachtin 1990, an essay composed in 1959–1961, mentioned in note 2.

⁵ In addition to its hierarchism, the concept of text is defined by Lotman in terms of (1) expression, (2) demarcation, and (3) structure. In my survey, these features do not appear seriatim, but are blended into the discussion.

terpretations are often possible, all integral), but the fact that they make sense in a community or culture and can be efficiently interpreted by its members. Herein lies perhaps the difference between Lotman's and Barthes's ideas of text. While both scholars consider the text as an autonomous object, Barthes's analyses disregard all extratextual properties and ideological relations, whereas these play a decisive role in Lotman's textual approach.

As argued in Lotman and Pjatigorskij ([1977] 1988)⁶, culture consists in a collection of rules which functions as a system of signs. The (written) text is a cultural product and may be regarded as a "semiotic space" in which the various codes combine in a unique manner" (Shukman 1986: 1088). In order to become texts, verbal messages must function semiotically, that is, they must possess a special cultural significance. This means that they must have a meaningful relation not only with other texts, but they must also function meaningfully within the relevant system of social and cultural codes governing religion, law, medicine, politics, art, etc. All texts are embedded in and, to a certain degree, conditioned by certain sociocultural rules. This relation can be simple and straightforward, or it can be polemic and ambiguous; but a verbal message lacking a cultural impact cannot be endowed with a textual status.

This means that the everyday utterance, or linguistic communication without a particular cultural meaning beyond the purely utilitarian, does for this reason not qualify as a semiotic sign, or text. It is called a "nontext". That the division between a text and a nontext is neatly defined only in theory, may be exemplified by the New York stock-index, a sports report, a shopping list, or the weather report; mundane texts, true, but not devoid of cultural relevance. It must be underscored that in the text-semiotic perspective as developed in the former Soviet Union, strictly linguistic well-formedness à la Chomsky is not as such decisive in verbal utterances, because what would at first blush seem like a random sequence of words (for instance, a magic formula, children's nonsense rhymes, a Dada poem) can nevertheless make perfect sense to specific interpreters and/or in specific sociocultural contexts. Of the three semiotic dimensions (Morris's syntactic, semantic, pragmatic factors) which may be distinguished in the text, the first two are thus integrated in, and overshadowed by, the third: "Eeny Meeny Mo" does function as what Lotman conceives as a "real text" ([1977] 1988: 124).

⁶ On Lotman's ideas, see also Segre 1984, for example.

In spite of the wide range of their interests, Lotman and his associates (such as Ivanov, Uspenskij, Toporov, and many others) gravitate towards a concept of text which is particularly applicable to dividing texts into "artistic" and "non-artistic" texts (see Shukman 1986). This is hardly surprising, because they are especially interested in how culturally-functioning signs (Lotman's "real texts") not only reflect a certain encoded meaning, but also how they enable interpreters to generate new and unexpected meanings of them, for example by placing them within the novel context of a different cultural (sub)code than the original or "natural" one:

In the course of the cultural functioning of the text, its original meaning is subjected to complex re-makings and transformations, which result in an *increase of meaning*. This may therefore be called the *creative* function of the text. In contrast to its communicative function, where the slightest change represents an error and a distortion of meaning, a text in its creative function tends to produce new meanings (cf. E. T. A. Hoffmann's words in the preface to his *Lebensansichten des Katers* where errors, slips of *Murr* about the creative role of misprints, and also the numerous incidents mentioned by Tolstoy, Akhmatova, and others, the pen, etc., have played a part in the creative process). If in the former function noise swallows up the information, it may creatively transform it in the latter. (Lotman 1987: 161)

By concluding that "the text in its modern semiotic definition, is no longer a passive carrier of meaning, but appears as a dynamic, intrinsically contradictory phenomenon, as one of the fundamentals of modern semiotics" (Lotman 1987: 163), Lotman transforms the text-sign from a mere vessel of meaning into an active meaning-generating agency, hereby moving textuality away from the statics of the post-Saussurian tradition and towards new horizons.

Text ideology

In the final analysis, this dynamic conception of the text as semiotic sign would seem more germane to "semiosis" in Peirce's sense of triadic sign-action, than to Saussure's dyadic sign-relation, between a signifier in opposition to a signified. It is true that the semiotic tradition in the former Soviet Union is conceptually closer to Saussure and, to some degree, to Hjelmslev, than to Peirce. One example of this is the notion of culture, which echoes *langue*, and the vision of the text

as *parole*; another, that Lotman operates with binary oppositions (such as systemic/non-systemic, univocal/ambivalent, center/periphery). Moreover, Lotman's focus (in tandem with Saussure's) is on man-made signs interpreted by human interpreters; while Peirce conceived of the sign, in a much broader way, to include all signs, man-made and/or natural. Yet it can perhaps be suggested that in Lotman's perspective, as in Peirce's, the text's meaning is not reducible to the system in which it is inscribed; it is an ongoing process whereby new relations with the world are being established and revived, and hence new meanings are being forged. Lotman's conception of the "real" sign as determined by culture can be regarded as akin to Peirce's "genuine" sign (at least in one of the senses in which Peirce uses this term): this is, in addition to being an entity in itself, a two-faced agency mediating meaningfully (that is, both functionally and creatively) between "reality" as represented in the sign and "reality" as interpreted by an interpreting mind; whereas Saussure's sign consists of, and is therefore reducible to, the sign-internal interaction and mutual dependence between its material side (signifier) and the "content" (signified) with which it is descriptively connected. This is textual ideology in structuralism, that is "in the restricted, semiotic, meaning of this word" (Greimas and Courtés 1982: 149).

Next, let us consider Eco's concept of the written text, which is radically eclectic as it seeks to harmonize and integrate many different semiotic traditions, particularly East European semiotics, "French" semiology, and "American" semiotics. In tandem with semiology (more commonly called structuralism), Eco concentrates, in his classic *A Theory of Semiotics* and later work, on modes of text production, while borrowing his textual concepts and terminology mainly from the communication model devised by information theoreticians. At the same time, however, Eco began to develop a text theory emphasizing textual interpretation. In consequence, his exploration of the "role of the reader" in interpreting texts has been guided expressly by Peircean concepts (Eco's *The Role of the Reader* [1979] 1984).

In *A Theory of Semiotics*, Eco notes that "usually a single sign-vehicle conveys many intertwined contents and therefore what is commonly called a 'message' is in fact a *text* whose content is a multilevelled *discourse*" (1979: 57; Eco's emphasis)⁷. If a text can express

⁷ Eco inverts the use of "text" and "discourse" as found in, for example, the work of van Dijk, for whom "text" is "the abstract notion ... , underlying what is intuitively known as 'connected discourse'" (van Dijk 1972: 1).

several coexisting messages, Eco argues, it is because the codes according to which it is encoded, are ideally shared by the utterer and the interpreter of the text. Except in the rare case of the absolutely simple and rudimentary sign, every sign constitutes for Eco a text; and a complex sign such as a painting is thus, for Eco, "not a sign but a text" (1979: 20, 250).

Eco realizes, of course, that while every sign is a vehicle of meaning, in order to do so it does not necessarily have to be produced by a human individual. Many signs, such as the so-called "natural" signs (signs of the weather, medical symptoms, etc.) have no utterer. But a sign does not function as a sign until it be recognized and understood as such, and interpreted by some (real or potential) interpreter. What is, however, crucial in making the sign (whether verbal or non-verbal) a text, is for Eco solely its multiple meaning-potential; as opposed, it must be reminded, to Lotman's above-discussed, more diversified requirements. A sign must be susceptible of receiving more than one meaning, including non-intended and even fanciful ones. In the interpretive act or acts new meanings can emerge as a result of the application by the interpreter of non-intended (by the sign producer) codes. In Eco's favored expression, the sign must be capable of lying.

Eco's identification of sign with text holds also true for the inverse operation, the written text as a semiotic sign — intentionally produced and conventionally interpreted. When Eco considered the sign as a text, he really used "text" in an extended, even metaphorical sense; while in his consideration of the verbal text as a sign Eco uses the term "text" also, and primarily, in reference to the particular written object, thereby using "text", somewhat confusingly, in two senses, literal and figurative, concrete and abstract. As it happens, Eco's argument concentrates upon the latter (the concept of text) while assuming a general acquaintance with the former (the object called text). Poorly defined, if defined at all, this object can only be known through the (fragments of) verbal texts which Eco uses as examples illustrative of his text theory. These include, in Eco ([1979]1984), texts as heterogeneous as a short story (*Un drame bien parisien*, by Alphonse Allais), an excerpt from a poem (*Toto-Vaca*, by Tristan Tzara), a paragraph from Wittgenstein's *Philosophical Investigations*, and Peirce's definition of the words "hard" and "lithium"). With such a wide topical selection of texts (from literary, philosophical and chemical genres), Eco shows a universal, Peircean spirit and departs from other semiotic traditions which either limit textual study to the study of lit-

erary texts, or define what constitutes a text in terms of culture, high and/or popular. Following Peirce's line of reasoning, the crucial distinction is not, as usually, between the artistic and the non-artistic, the verbal and the non-verbal, the cultural and the natural, but (as shall be shown in more detail in the next section) between the genuine, or triadic sign and signs which do not function triadically. In short, Peirce opposes semiosis to non-semiotic forms of textual sign-action.

In *The Role of the Reader* Eco states that the literary, philosophical, etc. text as "what one calls 'message' is usually a text, that is, a network of different messages depending on different codes and working at different levels of signification" ([1979] 1984: 5). At the same time he points out that "every text is a syntactic-semantic-pragmatic device whose foreseen interpretation is part of its generative process (Eco [1979] 1984: 3, 11). This last definition of the text as concept not only accommodates all three semiotic dimensions of the text; it also emphasizes the crucial role which text interpretation crucially has to play, in tandem with the earlier text production; and the use of the designation "device", rather than "sign", underscores that the text is however a complex human construction, something contrived by human design; and at the same time a means for bringing about a result, a kind of tool requiring, from both its maker and its user, a combination of workmanship and creativity, skill and imagination.

In "Peirce and the semiotic foundations of openness: Signs as texts and texts as signs" (Chapter 7 of Eco [1979] 1984), written in 1976, Eco deploys his ideas on a Peircean text theory by developing some of Peirce's concepts in a suitable textual direction. These concepts are not so much Peirce's well-known triad, icon-index-symbol, as his theory of the "interpretant". In other words, of the three relations which the sign has (with itself, with its referent, and with the meaning it is given), Eco goes beyond what the sign stands for and also concentrates on the dynamic process by which the sign (text) arouses an interpreting sign (meaning) in some interpreting mind (reader). Such a pragmatic approach includes and presupposes an approach from both semantics and syntactics, in the same way as Peirce's Thirdness includes and presupposes Secondness and Firstness. In fact, it is one of the many concrete manifestations of Peirce's three modes of being. Rather than giving here a detailed account of Eco's reading, interpretation, and application of Peirce's ideas, let us in what follows take a

closer look at how Peirce himself equated, or otherwise connected, text (as defined for the purpose here) with the adventure of the sign.

Peirce, text, and sign

Peirce did occasionally use “text” in a modern sense of the term⁸. Nevertheless, in Peirce’s days “text” was commonly used in classical philology, religious studies, and related disciplines, to refer to the words of Greek and Latin authors, and other, preferably “ancient” (N1:158,1892), pieces of writing, or manuscripts, invested with special authority, the Bible, especially⁹, and referring to Aristotle’s writing, his “Greek text, the context of the book calls more emphatically for a chapter of very different meaning from that which we read in the present text” and “the meaning that can be attached to the existing text”, written by Aristotle (MS 756: 10–11, c. 1906). This is how the term is commonly used by Peirce, and this is likewise how Peirce’s contemporary, Saussure, spoke of “written texts” (Saussure [1916] 1959: 1, 7), namely, as objects of comment and exegesis.

⁸ See, particularly, Peirce’s review-articles for *The Nation*, where he referred, for example, to “the illustrations, which are wood-cuts in the text” (N 2: 62, 1894); “there was a date, 10 Nov. 1619, in the text, and 11 Nov. 1620, in the margin” (N 2: 93, 1889); “its pages were filled with solid text” (N 2: 197, 1899); “The text occupies less than six hundred pages” (N 2: 265, 1900); “a text of half a million words” (N 3: 34, 1901); “the Appendix to the book ... fills more than half again as many pages as the body of the text” (N 3: 62,1890); “Heiberg prints for the first time the Greek text of Anatolius on the first ten numbers” (N 3: 87, 1902). From Peirce’s other works, see the following examples: “End of footnote” is immediately followed by “Text resumed” (MS 646: 8, 1910); and apropos of the opera Peirce remarked: “The business of the composer was to invent ‘beautiful melodies’. The text that was written below it was a secondary affair. Music and words were juxtaposed, as it were” (MS 1517: 31, 1896). The latter quote is from Peirce’s translation of William Hirsch’s *Genius und Degeneration* (1998), and Peirce’s use of “text” here is evidently a transposition of the original German *Text* (as an addendum, see publications on this theme, Gorrée 1996, 1997). See also the following passage: “I hold that it is necessary to make an emendation to the text of the 25th chapter of the *Second Prior Analytics* ...” (MS 318: 187, 1907), where Peirce also used “text” in the sense of “words”. In this connection it is interesting to note the following quote: “... if we take a piece of blank paper, and form the resolve to write upon it some part of what we think *about some real or imaginary condition of things*, then, that resolve being made and the whole sheet (called the []) having been devoted to that purpose exclusively,...” (MS 678: 42, 1910; underlining in the handwritten original). Here, the word which Peirce was apparently looking for to fill the blank space, could perhaps have been “text”, or an equivalent.

⁹ See further Seire 1988.

In respect to the modern meaning of "text" as constituting the object of research in these pages, Peirce, as a sign-theoretician, used terms such as "symbol", "discourse", "proposition", and "argument", thereby addressing himself to logical properties of the text, which will be elaborated later in greater detail. Here it must suffice to characterize the several concepts through which Peirce approached the phenomenon of text, briefly and seriatim, as follows: A symbol is a sign requiring intelligent or skilful interpretation to become meaningful. It is the vehicle of thought, and "all thinking is conducted in signs that are mainly of the same structure as words ..., or *symbols*" (CP 6.338, c. 1909). Reasoning, that is interpretation of signs by signs, whether spoken, written, or otherwise (such as pictorial), takes always a discursive form. Peirce wrote that

Reasoning by our older authors Shakespeare, Milton, etc. is called "discourse of reasoning", or "discourse" simply. The expression is not yet obsolete in the dialect of philosophers. But "discourse" also means talk, especially talk monopolized. That these two things, reasoning and talk, should have come to be called by one name, in English, French, and Spanish, a name that in classical Latin means simply, running about, is one of the curious growths of speech. (MS 597: 2, c.1902)

However, Peirce hastened to add to this that discourse, or reasoning, is "communication", and hence not "a sort of talk with oneself ... addressed to oneself" (MS 597: 3, c.1902). Accordingly, a "proposition" is, for Peirce, "any product of language, which has the form that adapts it to instilling belief into the mind of the person addressed, supposing him to have confidence in its utterer" (MS 664: 8, 1910); and in what Peirce called "argument", "[c]ertain facts are stated in such a way as to convince a person of the reality of a certain truth, that is, the argumentation is designed to determine in his mind a representation of that truth" (MS 599: 43, c.1902). Applied to written texts, these concepts (symbol, discourse, proposition, argument, *inter alia*) enable us to deal logically (that is, semiotically) with the text as a device for verbal definition, suggestion, persuasion, instruction, and other forms of communication through words.

First, it is necessary to consider the text as a material object. Construed in Peircean terms, it is a sign and, more specifically, a verbal sign. As a sign it must be seen on a par with all other objects which in Peirce's logic are susceptible of signhood. In a Peircean semiotics, anything (any object, event, phenomenon, concept, etc.) can, in certain circumstances, be a sign. Fisch underscores that "Peirce's general the-

ory of signs is so general as to entail that, whatever else anything may be, it is also a sign" (1983: 56). According to Peirce, signs in general are "a class which includes pictures, symptoms, words, sentences, books, libraries, signals, orders of command, microscopes, legislative representatives, musical concertos, performances of these ... (*MS* 634: 18, 1909). In short, "[a] sign is any sort of thing" (*MS* 800: 2, [1903?]), provided it is a "representation" and thus "stands for something to the idea which it produces, or modifies; or it is a vehicle conveying into the mind something from without" (*NEM* 4: 309, 1895)¹⁰.

It has been frequently noted, and commented upon, by Peircean scholars that Peirce's concept of the sign is very broad; much broader, at any rate, than all other semioticians's conception of signhood, which it encompasses. According to Greenlee, it is "deliberately broad" (1973: 24); but note Peirce's own affirmation that it "is a very broad conception, but the whole breath of it is pertinent to logic" (*NEM* 3: 3: 233, 1909). Indeed, despite Peirce's numerous definitions and redefinitions of the sign throughout his intellectual career¹¹, he never abandoned the broadness of its scope; nor did he change the essence of the logical properties of the sign as "something, A, which denotes some fact or object, B, to some interpretant thought, C" (*CP*: 1.346, 1903).

There is substantial evidence from Peirce's work that he had a keen interest in language and linguistics, in addition to many other fields of research, theoretical and applied. Peirce's numerous linguistically-oriented essays (the first of which is his 1865 Harvard Lecture I (*W* 1: 162ff., 1865)) are manifestations of a deeply-felt concern with language as a logical (i.e., for Peirce, as a semiotic) sign system. This interest manifests itself most peculiarly in Peirce's later period (from 1902), when the idea of a phenomenology governed by the three modes of being (Firstness, Secondness, Thirdness) had crystallized in the philosopher's mind¹². Unlike phenomenology in the more customary sense,

¹⁰ Pharies notes that "Peirce's definition of the term as anything capable of standing for something else is so broad that it includes many things that would not normally qualify for the term in everyday English (tokens, marks, badges, signals, ciphers, symbols; objects, animals, persons; propositions, arguments, sentences, paragraphs, books; mountains, seas, planets, stars, galaxies, universes), although it would be possible to say, for example, that a robin on the lawn is a sign of approaching spring, that a book is a sign of the author's labors, or that a galaxy is a sign that the laws of physics continue to operate" (1985: 14).

¹¹ For bibliographical key references, see Parmentier 1985: 45, n. 2.

¹² For a further discussion of Peirce's categories Firstness, Secondness, and Thirdness, see Gorlée 1994: 40–42.

Peirce's idea of phenomenology is the science studying "the collective total of all that is in any way present to the mind, quite regardless of whether it corresponds to any real thing or not" (*CP*: 1.284, 1905). Object of study can thus be, in a Peircean phenomenology, all that can possibly be perceived or thought. Thus we find linguistic phenomena rubbing shoulders with the myriad phenomena of a non-linguistic nature which call our attention. Peirce's doctrine of the three categories provides a means of dealing with all such phenomena indiscriminately, though not equally. To place Peirce's thought under the banner of philosophy of language is, nevertheless, a serious misconstrual of the facts, because it would fail to do justice to the universal scope of Peirce's logic. This is brought out beautifully by Jakobson, thus:

Peirce's semiotic edifice encloses the whole multiplicity of significant phenomena, whether a knock at the door, a footprint, a spontaneous cry, a painting or a musical score, a conversation, a silent meditation, a piece of writing, a syllogism, an algebraic equation, a geometric diagram, a weather vane, or a simple bookmark. The comparative study of several sign systems carried out by the researcher revealed the fundamental convergences and divergences which had as yet remained unnoticed. Peirce's works demonstrate a particular perspicacity when he deals with the categoric nature of language in the phonic, grammatical and lexical aspects of words as well as in their arrangement within clauses, and in the implementation of the clauses with respect to the utterances. At the same time, the author realizes that his research "must extend over the whole of general Semeiotic," and warns his epistolary interlocutor, Lady Welby: "Perhaps you are in danger of falling into some error in consequence of limiting your studies so much to Language." (1987: 442)

By categorizing signs not by their material aspects but by the different ways in which they may be meaningful, Peirce conceived of many human languages (speech, gestures, music, and others), in which experience may be differently communicated. Verbal language (that is, language consisting of verbal signs) is, of course, pivotal among these languages. Peirce said that "[b]y a 'verbal sign' I mean a word, sentence, book, library, literature, language, or anything else composed of words" (*MS* 318: 239, 1907)¹³. This list, from Peirce's later period, is nearly echoic of earlier enumerations, such as "words and phrases, and

¹³ In his monograph on *Charles S. Peirce and the Linguistic Sign*, Pharies takes the linguistic sign only in the narrowest sense: "Peirce would use it to refer to any linguistic representation, including words, sentences, conversations, even whole books. I am employing it in the sense that has become traditional in linguistic literature, namely, that is 'word'" (Pharies 1985: 9, n. 7). This limits the value of this book.

speeches, and books, and libraries” (*MS* 404: 5, 1893). As Fisch interprets Peirce,

It goes without saying that words are signs; and it goes almost without saying that phrases, clauses, sentences, speeches, and extended conversations are signs. So are poems, essays, short stories, novels, orations, plays, operas, journal articles, scientific reports, and mathematical demonstrations. So a sign may be a constituent part of a more complex sign, and all the constituent parts of a complex sign are signs. (1983: 56–57)

Scattered throughout Peirce’s works there are numerous references to, and discussions of, written signs of all kinds and genres, from isolated simple word-signs to complex verbal structures. For instance, the words “witch” (*MS* 634: 7, 1909), “Hi!” (*MS* 1135: 10, [1895] 1896), “runs” (*MS* 318: 72, 1907), and “whatever” (*CP*: 8.350, 1908) are for Peirce signs; so is “the word ‘man’ [which] as printed, has three letters; these letters have certain shapes, and are black” (*W* 3: 62, 1873; cf. *MS* 9: 2, 1904). Peirce considered as a sign “[a]ny ordinary word, as ‘give’, ‘bird’, ‘marriage’” (*CP*: 2.298, 1893)¹⁴ and combinations of words, such as “all but one”, “twothirds of”, “on the right (or left) of” (*CP*: 2.289–2.290, c.1893).

In his writings, Peirce further presented and analyzed many sentence-signs (grammatically complete or elliptic), such as “Napoleon was a liar” (*MS* 229C: 505, 1905), “King Edward is ill” (*MS* 800: 5, [1903?]), “Fine day!” (*MS* 318: 69, 1907), “Let Kax denote a gas furnace” (*CP*: 7.50, 1867), “Burnt child shuns fire” (*MS* 318: 154–155, 1907), and “Any man will die” (*MS* 318: 74, 1907). By the same token, Peirce wrote that “if -- then --”, “— causes --”, “-- would be --”,

¹⁴ In July of 1905, Peirce wrote to Lady Welby, in a draft of a letter which was never sent to his correspondent: “The dictionary is rich in words waiting to receive technical definitions as varieties of signs” (*PW*: 194, 1905). His long list includes many instances of verbal communication, spoken and/or written: “Then we have *mark, note, trait, manifestation, ostent, show, species, appearance, vision, shade, spectre, phase*. Then, *copy, portraiture, figure, diagram, icon, picture, mimicry, echo*. Then, *gnomon, clue, trail, vestige, indice, evidence, symptom, trace*. Then, *muniment, monument, keepsake, memento, souvenir, cue*. Then, *symbol, term, category, stile, character, emblem, badge*. Then, *record, datum, voucher, warrant, diagnostic*. Then, *key, hint, omen, oracle, prognostic*. Then, *decree, command, order, law*. Then, *oath, vow, promise, contract, deed*. Then, *theme, thesis, proposition, premiss, postulate, prophecy*. Then, *prayer, bidding, collect, homily, litany, sermon*. Then, *revelation, disclosure, narration, relation*. Then, *testimony, witnessing, attestation, avouching, martyrdom*. Then, *talk, palaver, jargon, chat, parley, colloquy, tittle-tattle, etc.*” (*PW*: 194, 1905). Regrettably, the rest of this text — possibly containing Peirce’s comments on the catalogue — did not survive.

and "-- is relative to -- for --" are "among linguistic signs" (*CP*: 8.350, 1908). Peirce's favorite examples of sentence-signs were perhaps, chronologically, "This stove is black" (e.g., *CP*: 1.551, 1867), the military command "Ground arms!" (e.g., *CP*: 5.473, 1907 and *MS* 318: 37, 175, 214, and 244, 1907), and "Cain killed Abel" (e.g., *NEM* 3: 839, 1909 and *CP*: 2.230, 1910), all of these repeatedly used by Peirce as illustrative examples.

Pieces of writing (that is, texts) are signs. Though a sentence may sometimes be a text in itself, texts are more commonly combinations of sentences, complex signs consisting in their turn of signs, which again consist of signs. This may be exemplified by the syllogism: a compound sign built up, logically as well as linguistically, of three subsigns, which are again divisible, and so on: "All conquerors are Butchers / Napoleon is a conqueror / ∴ Napoleon is a butcher" (*W* 1: 164, 1865). The theater directory and the weather forecast published in the newspaper are, for Peirce, predictive signs (*MS* 634: 23, 1909); so are "the books of a bank" (*MS* 318: 58, 1907) and "an old MS. letter ... which gives some details about ... the great fire of London" (*MS* 318: 65, 1907). As a further example of a verbal text-sign mentioned by Peirce we might finally mention "Goethe's book on the Theory of Colors ... made up of letters, words, sentences, paragraphs, etc." (*MS*7: 18, 1904).

Text and semiosis

All linguistic signs, regardless of size or complexity, are first and foremost signs of Thirdness: Peirce's symbolic signs (see *CP*: 5.73, 1903). "All words, sentences, books and other conventional signs are Symbols" (*CP*: 2.292, c.1902): they stand for the object not because they have a (qualitative or structural) similarity to it (which would make them iconic signs); nor are they (physically or causally) connected with their object (as is the case of indexical signs). A symbolic sign is a sign "simply because it will be understood to be a sign" (*MS* 307: 15, 1903) and it "is applicable to whatever may be found to realize the idea connected [with it]" (*CP*: 2.298, 1893).

As Thirds, symbolic signs only function fully in a triadic sign relation including the sign itself, the object it stands for, and the sign in which the "first" sign is interpreted, its interpretant-sign. Every interpretant is a sign, every sign is not an interpretant:

If this triple relation is not of a degenerate species, the sign is related to its object only in consequence of a mental association, and depends upon habit. Such signs are always abstract and general, because habits are general rules to which the organism has become subjected. They are, for the most part, conventional or arbitrary. They include all general words, the main body of speech, and any mode of conveying a judgment. (*CP*: 3.13, 1867)¹⁵

“Habit” must here be understood in the Peircean sense: not as an etiquette fixed once and for all, but, on the contrary, as a rule of procedure adopted for the practical purpose of successfully interpreting a sign. Phenomenologically, a phenomenon is considered a First when looked at “in itself”; it is considered a Second when compared with either internal or external characters or with its own context; and it is considered Third when regarded as a totality of influences within a postulated unity predicting the future. All signs dealing not with feeling (Firstness) nor with action (Secondness) but with thought (Thirdness), that is Peirce’s “intellectual concepts” (*CP*:5.467, 1907), are in this sense habit-bound or habitual. The understanding and interpretation of a linguistic signs is an intellectual (or better, expert or proficient) activity, and therefore a habitual, rule-governed activity.

However, the rule must always be conceived as being ultimately based upon some deliberate resolution adopted by the language users to give certain linguistic signs certain meanings. The implication of this is again that language users as a group may also at any point decide to change the rules, while the “new” rules may be overruled in their turn by any following decision. Change and development are, as repeatedly argued by Sebeok, essential to language, or better all human languages. Though the concept of the linguistic sign as an ad hoc rule of procedure would make linguistic change into an arbitrary entity, one which, paradoxically, would be unfit for efficient communication, yet the fact that the linguistic sign is habit-bound means, at the same time, that it is also conventional inasmuch as a word, sentence, or text can only function as a means of communication if the rule or habit is, to some extent, somehow agreed upon by a consensus in the community of language users.

In order to communicate its message the text-sign must function in a tripartite (sign-object-interpretant) relation called “semiosis”. Semiosis as Peirce conceived it, seems to be both the action of the

¹⁵ The first sentence of this quote speaks on the concept of degenerate signs as opposed to genuine or regenerate signs, see the discussion in Gorlée 1990.

sign itself and the process of its interpretation. These are in fact two aspects of the same activity, because a sign is only capable of producing an interpretant in a thinking mind if it is an element of a triadic relation. Only the latter constitutes a real thought-sign, as opposed to the "quasi-sign" which is governed by "automatic regulation" (CP: 5.473, 1907) between sign and object.

In a dyadic sign relation, such as bounds linguistic semiotics or structuralism, the sign is "physically connected with its object; they make an organic pair, but the interpreting mind has nothing to do with this connection, except remarking it, after it is established" (CP: 2.299, c.1902). In order to be meaningful and genuine a non-triadic sign does not require intelligent interpretation (that is, an interpretation which is at the same time habitual and habit-changing, conventional and creative), either because the sign immediately exhibits its meaning or because it directly points toward it. That there is no real action in the interpretation of a one-place, iconic sign, a First, should be clear; but the two-place, indexical sign, a Second, equally disqualifies itself from semiosis, because it signifies its object either by law or by "brute force with no element of inherent reasonableness" (CP: 6.329, c. 1909). It needs Thirds in their combination.

Peirce emphasized explicitly that by semiosis he meant "an action, or influence, which is, or involves, a cooperation of three *subjects*, such as a sign, its object, and its interpretant, this tri-relative influence not being in any way resolvable between pairs" (CP: 5.484, 1907). Text semiosis means that it is essential for the text-sign to embody predictive ideas, thoughts, a message, because they are what the text is about, its object. However, it is not sufficient for a text-sign to have or possess a meaning-content in itself; its persona must be recognized, identified, and interpreted as such in order to operate as a full-fledged symbolic sign. It may on occasion even be misunderstood or manipulated (see Eco's lying), because from a strictly Peircean perspective the nature of the interpretation produced is, in the final analysis, as irrelevant as is the person of the individual interpreter. The text-sign itself is endowed with a power which, coming from the object and ultimately referring back to it, must in order to realize its full semiotic effect, appeal forward through it (the sign) to what is potentially an endless series of interpretant signs, each one interpreting the one preceding it. Textual semiosis teaches ultimately that the "real" meaning of the text-sign is not necessarily identical with the *prima facie* object which the text refers to, but rather with the rule or habit (its interpre-

tant) by which one would, under certain conditions, read, understand, and interpret it.

This can be illustrated by Peirce's account from the "life" of one text-sign, thus:

Take, for example, that sentence of Patrick Henry which, at the time of our Revolution, was repeated by every man to his neighbor: "Three millions of people, armed in the holy cause of Liberty, and in such a country as we possess, are invincible against any force that the enemy can bring against us." Those words represent this character of the general law of nature. They might have produced effects indefinitely transcending any that circumstances allowed them to produce. It might, for example, have happened that some American schoolboy, sailing as a passenger in the Pacific Ocean, should have idly written down those words on a slip of paper. The paper might have been tossed overboard and might have been picked up by some Jagala on a beach of the island of Luzon; and if he had them translated to him, they might easily have passed from mouth to mouth there as they did in this country, and with similar effect. (*CP*: 5.105, 1902)

The history of Henry's pronunciamiento is, at least potentially, the life history of all text-signs. Texts need to receive a (real or potential) interpretation in order to be able to operate as signs in different spatial and/or temporal settings, that is, they must be meaningful in shifting time/place semiotic relations. If a combination of verbal signs does not draw the attention toward itself as a sign and does not manifest itself as mediating between what it can mean and what it is interpreted to mean, it remains a non-text (see Lotman's concept of non-text). A text which, when transplanted in time and/or place, loses its power to appeal to an interpreting mind, becomes thereby a non-semiotic (that is, a dead) entity. From the perspective of a Peircean semiotics, the text-sign is characterized by unlimited semiosis, by the ongoing process of growth through interpretation. What keeps the text-sign alive is precisely that it elicits an interpretant again and again, and that these interpretants (and the interpretants of the interpretants) are not only rule-governed entities but also (whether virtually or really) rule-changing and rule-creating activities. This is vital for semiosis.

It is apparent that for Peirce, a written text was a complex verbal sign partaking of the basic properties common to semiotic signhood. Unfortunately, Peirce himself did not develop an explicit text-semiotics, he was no textologist in the modern sense, so that the significance of his theory for the purpose of a text-semiotics will require some interpretive extrapolation. The project of elaborating a Peirce-

based text-semiotics expects that it has at this point been sufficiently argued that it must be dramatically different from other sign-theoretical text-theories, particularly from Saussure-based text-theories. As opposed to French semiology with its emphasis on text production, pragmatic semiotics (that is, semiotics in the Peircean tradition) proceeds to the contrary and manifests itself first and foremost as a theory of sign interpretation. The sign as Peirce conceived it is, in contradistinction to its semiological counterpart, not defined in terms of an utterer and/or interpreter but in terms of its dynamic relations, with itself, with its object, with its interpretant. Through semiosis, the sign deploys its meaning; its full meaning is thus ideally knowable, if only in some hypothetical future. Sign-action and sign-interpretation are not necessarily determined by a human utterer nor interpreter. Peirce's semiosis is self-generating triadic action. As all semiotic signs, the text-sign is a living agency actively seeking to realize itself through some interpreting mind rather than passively waiting to be realized by it, as is the case in linguistic semiotics.

One reason why a Peircean concept of text, and hence a Peircean text-semiotics, may at first seem fanciful is that it diminishes the significance of the reader/interpreter. In a semiological (structuralist) text-theory, the reader/interpreter is customarily looked upon as the sole discourse-producing subject, as the one agency giving the text-sign its meaning by matching signifier with signified. By moving instead to a pragmatic, Peircean paradigm, the presence of an interpreter is somehow subsumed but at the same time deemphasized. Apparently, Peirce did not have in mind one single person or not even one specific mind, but in an abstract way any receptive organism capable of generating textual interpretants. Peirce called this an intelligent "quasi-mind". As Peirce wrote, semiosis "not only happens in the cortex of the human brain, but must plainly happen in every Quasi-mind in which Signs of all kinds have a vitality of their own" (*NEM* 4: 318, c.1906); and a "quasi-interpreter" is one example of such a "quasi-mind" (*CP*: 4.51, 1906).

Peirce did therefore not include the interpreter as a fourth component of semiosis, in addition to the interpretant. This is not to say that Peirce did not recognize the existence of the interpreter, because he did in fact refer to an interpreter occasionally, e.g., in his often-cited definition of a sign as

... something which stands to somebody for something in some respect or capacity. It addresses somebody, that is, creates in the mind of that person an equivalent sign, or perhaps a more developed sign. (CP: 2.228, c.1897)

On the whole, however, Peirce seems to indicate that the meaning of the text-sign must be logically conceived as relatively independent from the reader/interpreter and transpires wholly in what is an endless series of individual semiotic events. This proposition argued and documented in this essay, provides a new and fruitful perspective on the phenomenon of text, one which undercuts subjective signification and elevates semiotics to the plane of intersubjective and objective inquiry, thereby enhancing, not restraining, its creative and innovative component of textology¹⁶.

References

- Adam, Jean-Michel 1976. *Linguistique et discours littéraire. Théorie et pratique des textes*. With collab. Jean-Pierre Goldenstein. Paris: Librairie Larousse.
- Bachtin, Michail M. 1990. Das Problem des Textes in der Linguistik, Philologie und in anderen Humanwissenschaften. Versuch einer philosophischen Analyse. Transl./comm. Johanna-Renate Döring-Smirnov, Aage A. Hansen-Löve, Walter Koschmal & Herta Schmid. *Poetica* 22(3/4): 436–487 [in English: Mixail M. Baxtin or Mikhail Bakhtin].
- Barthes, Roland 1988. *The Semiotic Challenge*. Transl. Richard Howard. New York: Hill and Wang.
- Eco, Umberto 1979. *A Theory of Semiotics* (= Advances in Semiotics). Bloomington: Indiana University Press.
- [1979]1984. *The Role of the Reader: Explorations in the Semiotics of Texts* (= Advances in Semiotics) (= First Midland Book Edition). Bloomington: Indiana University Press.
- Fish, Max H. 1983. Just how general is Peirce's general theory of signs? *American Journal of Semiotics* 2(1/2): 55–60.
- Gorlée, Dinda L. 1990. Degeneracy: A reading of Peirce's writing. *Semiotica* 81(1/2): 71–92.
- 1992. Symbolic argument and beyond: A Peircean view on structuralist thought. *Poetics Today* 13–3 (Fall): 407–423.
- 1994. *Semiotics and the Problem of Translation: With Special Reference to Charles S. Peirce* (= Approaches to Translation Studies, 10). Amsterdam and Atlanta, GA: Rodopi.

¹⁶ Further discussion may be encountered in Gorlée 1996a.

- 1996. Opera translation: Charles Peirce translating Richard Wagner. In: Tarasti, Eero (ed.), *Musical Semiotics in Growth* (= Acta Semiotica Fennica, 4). Bloomington: Indiana University Press and Imatra: International Semiotics Institute, 407–435.
- 1996a. A Eureka procedure: Pragmatic discovery in translation. *S: European Journal for Semiotic Studies* 8(2/3): 241–269.
- 1997. Intercode translation: Words and music in opera. *Target* 9(2): 235–270.
- 1997a. Hacia una semiótica textual Peirciana (I). *Signa* 6: 309–326.
- 1998. Hacia una semiótica textual Peirciana (II). *Signa* 7: 185–201.
- Greimas, A. J. and Courtés, J. 1982. *Semiotics and Language: An Analytical Dictionary* (= Advances in Semiotics). Transl. Larry Crist, Daniel Patte, James Lee, Edward McMahon II, Gary Phillips & Michael Rengsdorf. Bloomington: Indiana University Press.
- Jakobson, Roman 1987. A glance at the development of semiotics. In: Jakobson, Roman; Pomorska, Krystyna and Rudy, Stephen (eds.), *Language and Literature*, Cambridge, MA and London: The Belknap Press of Harvard University Press, 436–454.
- Lotman, Ju. M. [1977] 1988. Problems in the typology of texts. In: Lucid, Daniel P. (ed., transl.), *Soviet Semiotics: An Anthology*, New foreword Thomas A. Sebeok. Baltimore and London: The John Hopkins University Press, 119–124.
- 1987. On the contemporary concept of the text. *Livstegn* 3: 159–163 [Russian and English text].
- Lotman, Ju. M. and Pjatigorskij, A. M. [1977] 1988. Text and function. In: Lucid, Daniel P. (ed., transl.), *Soviet Semiotics: An Anthology*, New foreword Thomas A. Sebeok. Baltimore and London: The John Hopkins University Press, 125–135.
- Parmentier, Richard J. 1985. Signs' place in *medias res*: Peirce's concept of semiotic mediation. In: Mertz, Elizabeth and Parmentier, Richard J. (eds.), *Semiotic Mediation: Sociocultural and Psychological Perspectives*, (= Language, Thought, and Culture: Advances in the Study of Cognition). Orlando, FL: Academic Press, 23–48.
- Peirce, Charles Sanders 1931–1961. *Collected Papers of Charles Sanders Peirce*, Charles Harthorne, Paul Weiss, and Arthur W. Burks (eds.), vols. 1–8. Cambridge, MA: The Belknap Press of Harvard University Press. [Reference will be designated *CP*.]
- 1975–1987. *Contributions to The Nation*, Kenneth Laine Ketner and James Edward Cook (eds.), 4 vols. Lubbock, TX: Texas Tech Press. [Reference will be designated *NEM*.]
- 1977. *Semiotics and Significs: The Correspondence between Charles S. Peirce and Victoria Lady Welby*, Charles S. Hardwick (ed.). Bloomington and London: Indiana University Press. [Reference will be designated *PW*.]

- 1979. *The New Elements of Mathematic by Charles S. Peirce*, Carolyn Eisele (ed.) 4 vols. The Hague and Paris: Mouton/Atlantic Highlands, NJ: Humanities Press. [Reference will be designated *NEM*.]
- Unpublished manuscripts. Peirce Edition Project. Indiana University-Purdue University at Indianapolis. [Reference will be designated *MS*, followed by manuscript number, page number, and year of writing.]
- Petőfi, János S. 1986. Report: European research in semiotic textology: A historical, thematic, and bibliographical guide. *Folia Linguistica* 20(3/4): 545–571.
- Pharies, David A. 1985. *Charles S. Peirce and the Linguistic Signs* (= Foundations of Semiotics, 9). Amsterdam and Philadelphia: John Benjamins.
- Sebeok, Thomas A. 1986. *I Think I am a Verb* (= Topics in Contemporary Semiotics). New York and London: Plenum Press.
- Segre, Cesare 1984. Culture et texte dans la pensée de Yurij M. Lotman. In: Halle, Morris; Matejka, Ladislav; Pomorska, Krystyna; Uspenskij, Boris (eds.), *Semiosis: Semiotics and the History of Culture in Honorem Georgii Lotman* (= Michigan Slavic Contributions, 10). Ann Arbor: The University of Michigan, 3–15.
- Shukman, Ann 1986. Literary texts. In: Sebeok, Thomas A. (gen. ed.), *Encyclopedic Dictionary of Semiotics*, (= Approaches to Semiotics, 73). 3 vols. Berlin, New York & Amsterdam: Mouton de Gruyter, 2: 1087–1088.
- Van Dijk, Teun A. 1972. *Some Aspects of Text Grammars*. The Hague: Mouton.

Семиотика текста:

текстология как машина выживания

Сигнификативные практики, с помощью которых живые существа общаются, являются, по Себеоку, машинами выживания. Соответственно, в применении к семиотическому анализу текста или текстологии Бахтина мы можем говорить о человеческой машине выживания. Она изучалась разными семиотическими школами (включая Московско–Тартускую школу), с обращением к языку, культуре, жанру и, что важно, к идеологии текста. В данной статье аспекты текстологии изучаются в свете пирсовской общей теории знаков. Обсуждается понятие текста в опубликованных и неопубликованных сочинениях Пирса и демонстрируется его соотношение с семиозисом и другими категориями Пирса. Наш проект разработки пирсовской текстовой семиотики основывается на презумпции ее существенного отличия от других знаковых текстовых теорий и указывает нам путь к более интересующей и креативной текстологии.

Teksti semiootika: tekstoloogia kui ellujäämismasin

Signifikatiivseid praktikaid, millede abil elusolendid suhtlevad, nimetab Sebeok ellujäämismasinateks. Vastavalt võiks teksti semiootilise analüüsi või Bahtini tekstoloogia puhul rääkida inimese ellujäämismasinatest. Seda on uuritud erinevate semiootikakoolkondade poolt (ka nõukogude semiootikas) pöördumistega keele, kultuuri, žanri ja, mis on oluline, ideoloogiliste käsitluste poole. Antud artiklis pööratakse tekstoloogiale tähelepanu Peirce'i üldise märgiteooria valguses. Teksti mõiste üle arutlemine Peirce'i avaldatud ja avaldamata kirjutiste põhjal seostatakse semioosise ja teiste Peirce'i kategooriatega. Peirce'i põhise tekstisemiootika väljatöötamise projekt toetub tema eripärale teiste märgiliste tekstiteooriate suhtes ja näitab meile teed intersubjektiivsema ja kreatiivsema tekstoloogia juurde.

**Czech and Tartu–Moscow semiotics:
The cultural semiotics of
Vladimír Macura (1945–1999)
In memoriam Vladimír Macura**

*Thomas G. Winner*¹

986 Memorial Drive, Apartment 404, Cambridge,
Massachusetts 02138 USA
e-mail: tgipwinner@mediaone.net

Abstract. Among the national scientific groups, it was the Prague Linguistic Circle that had the most decisive affinity to the work of the Moscow–Tartu school. This paper examines the work of one of the most tireless contemporary Czech interpreters of the Lotman school, Vladimír Macura (1945–1999), whose work on Czech literary and historical texts are outstanding examples of the reverberation of Lotmanian semiotics of culture in the Czech Republic. This is particularly the case in Macura's reevaluations of the texts of the Czech National Revival of the late eighteenth and early nineteenth centuries, especially in two books, *Známění zrodu* (Signs of Birth) (1995) and *Český sen* (The Czech Dream) (1998). In these works Macura looked at this critical period in Czech national history as a multi-layered semiotic text in both the verbal and visual spheres. The present paper is an attempt at an exploration of Macura's treatment in this manner of the following: the Czech language, the city of Prague, the question of Czech national self-identification in general and as part of a larger category, the world of the Slavs. An important aspect of this project is an examination of Macura's exploration of the value functions of symbolic animals and plants in Czech Revival culture, and its re-

¹ I am indebted to Pavel Janoušek, Director of the Institute for Czech Literature of the Academy of Sciences of the Czech Republic, for his great bibliographic assistance. I wish to express my gratitude to dr. Naděžda Macurová for her kind permission to publish illustrations from Macura's works.

lation to the axiology of Czech (Slavic) cultural identity. The paper is dedicated to Macura's memory.

1. Introduction

The Prague Linguistic Circle of the 1920s and 1930s and the Tartu–Moscow school of cultural semiotics are complexly interconnected. Both groups start from Saussurean linguistics and semiotics. However, the Prague group, and some of the later Russian “formalists,” especially Jurij Tynjanov, and the Moscow–Tartu school broke with Saussure's rigid dichotomies (langue/parole, synchrony/diachrony, etc.). The first critique of Saussure was expressed in 1929 in a notable statement by Roman Jakobson and Jurij Tynjanov (1929) in which the authors asserted that each synchronic slice of a verbal text also has a strong diachronic character, for example in stylistic archaizing, and each diachronic system is not free of synchronic layers. Thus the static and the dynamic were now united. For Jakobson and Tynjanov, Saussure's bilateral sign was not sufficient; the significant unit was the text. But the literary text was also insufficient, and since, in the view of Jakobson and Tynjanov, such semiotic units need not be limited to verbal ones, the beginning of a semiotics of culture was laid. For particular signs were embedded in other signs of the text, and the boundaries of texts were permeable. As Mukařovský was to point out several years later (1936), external stimuli entered the text through the intention of the creating and observing subjects. Mukařovský saw the literary text in Hegelian terms as autonomous, subject to internal changes brought about by Hegel's *Selbstbewegung* (Czech *samopohyb*), but also vulnerable to outside stimuli. For Mukařovský the individual sign was infected by the context of other signs in the same text, and the text itself interacted with other literary texts cast in similar stylistic traditions (e.g. Romanticism), and national traditions as well (French literature). This position applied to all the arts. And toward the end of his life Mukařovský postulated a “System of Systems” which, while only sketchily defined, prophesied the Tartu–Moscow semiotics of culture and Lotman's *semiosphere*.

From the late 1920s to our days Euro–American semiotics has diverged, taking different paths: those who base themselves on Saussure's signifier and signified² (primarily French and American semi-

² This led to such verbal concoctions as the concept of post-structuralism which reinvented semiotic contextuality. I have discussed this in Winner (1995: 243–275).

otics³) and those who broke through Saussurean boundedness, primarily the Prague and Tartu schools and the continuation of the Prague tradition by Jakobson during his American period (1942 until his death in 1982).

2. The Prague Linguistic Circle and the Tartu–Moscow school

The Prague Linguistic Circle and the Moscow–Tartu school chronologically overlapped. In 1973 in Moscow, during our first face-to-face meeting Jurij Lotman told me that he was in correspondence with Mukařovský, and that he was concerned about the harsh political climate under which Mukařovský had to live and work at that time.

While in the 1920s Mukařovský, the chief aesthetician of the Prague group, was still drawn to the Russian Formalists, by the early 1930s he had repudiated the principles of their project in his sharply critical review (1934) of the Czech translation of Viktor Šklovskij's most radical formalist statement, his programmatic *Theory of Prose* (*O teorii prozy*).

It is thus important to see the pivotal differences between, on the one hand, French and American “structuralism,” firmly placed into the Saussurean mold, and the program of the Prague group whose agenda was launched in renunciation of Saussurean statism and advanced instead the notion of *system* or *structure* as relational and dynamic, forever in motion and implying multifunctionality and polysemy, thereby launching Prague structuralism and later semiotics as an original initiative which led to the path-breaking sign theory in various domains, not only verbal, but also visual, audial, gustatory and tactile texts, and to the first study in semiotics of culture, without naming it as such, Bogatyrev's investigation of the function of folk costumes in Moravian Slovakia (Bogatyrev 1936), and was later to lead to the broad Lotmanian program of semiotics of culture and, towards the end of his life, to his formulation of the principle of the *semiosphere*

³ Peirce was not a perceptible influence on either French or Prague–Tartu–Moscow semiotics until relatively recently, except for the work of Jakobson during the 70s and 80s and the pioneering work of semioticians like the late Max Fisch and his group, Kenneth Kettner, the late Richard Martin in the United States, Gérard Deledalle in France, Elizabeth Walter and the late Max Bense in Germany, and Jerzy Pelc and his school of logical semiotics in Poland. It is therefore not part of our consideration in this paper.

(Lotman 1990). The Prague school thus foreshadowed Tartu semiotics of culture in their rejection of the Saussurean dichotomies, their teleological model, their view of literature not as an isolated series but as related to other artistic and broadly cultural domains, including everyday behavior and history, thus abandoning Saussure's logocentrism. Whereas the Tartu–Moscow school initially posited natural language as the primary modeling system, and all so-called secondary modeling systems as structured along the model of this primary system, by the 1980s this school had cast off this split into the two classes of modeling systems and emancipated non-verbal semiotic systems from the hegemony of the linguistic model as the primary modeling system, as had the Prague group earlier.

3. Vladimír Macura (1945–1999) and the Tartu–Moscow school

I turn now to one of the most persistent interpreters of the relation of the Prague school and the Moscow–Tartu school who, unfortunately died at a very young age this past April, whose works were of signal importance and uniquely original, but who, because of his premature death is not known to any extent outside the Czech-speaking world.

I am thinking of Vladimír Macura (1945–1999) to whose memory this paper is dedicated (Fig. 1). He was an admirer of Lotman and his school and examined literary and historical texts in the manner of Tartu semiotics of culture, and he also had a significant interest in Estonian language and culture in which he found many parallels to the evolution of Czech culture and language. He was struck by the fact that both the Czech and the Estonian nations, both small in size, found themselves, in the nineteenth century, overwhelmingly dominated, politically, culturally, and linguistically, by other cultures, German in the case of the Czechs, Russians and Germans in the case of Estonia. Macura learned Estonian, and translated some works of Estonian literature into Czech, and some of his works were also translated into Estonian. Only a few examples of his work with or on Estonian topics must suffice here⁴: They are “Legendaarne Kangelanna” (*Horisont*, Tallinn) (Macura 1998 (an Estonian interpretation of the Czech Libuše myth); “Kümme XX sajandi tšehhi luuletajat” [Twenty Czech Poets of

⁴ For a full list of Macura's work that is concerned with Estonian culture, see *References* below.

the 20th Century) (as editor), *Eesti Raamat*, Tallinn (Macura 1996); "Eesti keel ja kirjasõna tšehhi ajakirjas aastal 1946", *Keel ja Kirjandus* (Macura 1974). He also became interested in Czech–Estonian literary relations (1976) and introduced several Estonian writers to Czech readers (A. Tammsaare (1976), D. Vaarandi, E. Niit, V. Luik (1988), Lennart Meri (1991)). He interviewed Lotman and published this dialogue both in Czech and in Slovak (1991, 1992), and his many studies on the Moscow–Tartu school (1994, 1995a, 1995b) are of great interest.

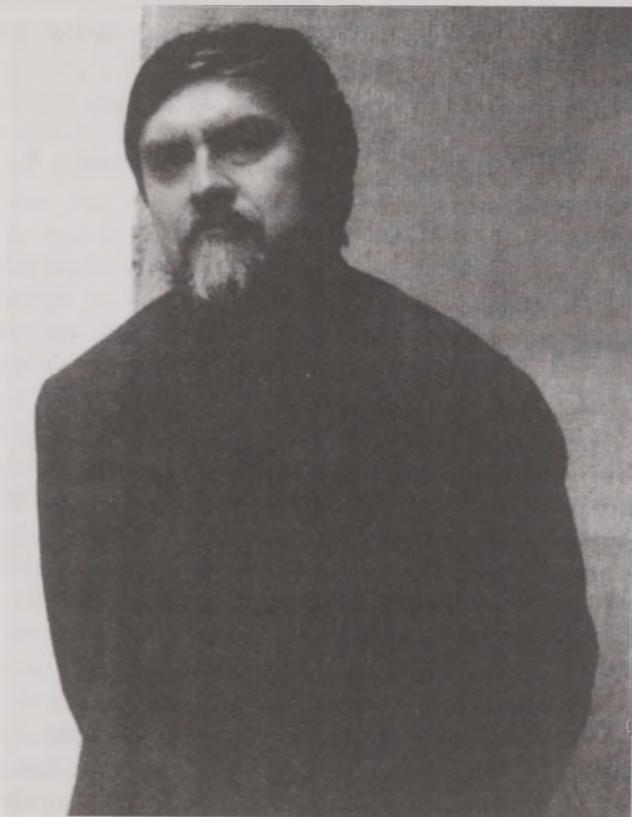


Figure 1. Vladimír Macura 1945–1999.

In 1974 Macura co-founded (with V. Novotný) the then illegal Society of Friends of the Baltic (Baltický svaz), illegal in communist Czechoslovakia which published a *samizdat* journal called *Läänemere Liidu*

Liige. After the “velvet revolution,” the journal became official under the new name of *Buletín česko–estonského klubu Baltica*. When writing about Estonia during the communist reign, Macura frequently used the *nom de plume* Vladimír Kreutzwald, after the name of the Estonian Revivalist, F. R. Kreutzwald (1803–1882) who recorded Estonian folklore and produced the epic *Kalevipoeg*, the story of the mythical founder of the Estonian nation.

4. Macura’s original work on semiotics of culture

Macura’s writings covered many genres: novels, scholarly essays on literary theory, book reviews, journalistic feature articles, and translations, mainly from Estonian to Czech. His studies at Charles University in Prague in the tradition of the Prague Linguistic Circle (he was a student of Felix Vodička), shaped his structuralist and semiotic approach in the analysis of literary and historical texts. In the 1980s, when Moscow–Tartu writings became more freely available, he was strongly attracted to Lotmanian semiotics of culture, which is evidenced in his historical writings on the Czech National Revival (*Národní obrození*) of the late eighteenth and early nineteenth centuries. This new perspective characterized his book, *Signs of Birth* (*Znamení zrodu*, 1995) and his last published monograph *Český sen* [*The Czech Dream*] (1998). In *Signs of Birth* he saw the critical period of the Czech National Revival as a multi-layered semiotic web, characterized by a certain artificiality, mystification and game-playing on the part of the Czech intelligentsia. This was a radical departure from the traditional Czech view of the popular romantic Herderian nationhood. Macura’s whimsically entitled *Masaryk’s Boots and other-semi(o)feuilletons* [*Masarykovy boty a jiné semi(o)fejetony*] (1993), incorporates selections from his feature articles that appeared in the weekly *Tvar* (Form) during 1992–1993. Themes of Czech history and disquisitions on the Czech language and Czech literature are interspersed with semiotically interpreted popular pieces, on advertising, Czech banknotes after the “divorce” from Slovakia, the Czech flag, Romas as “others,” the history of Czech toponymies, and on other themes. In *The Czech Dream* (*Český sen*, 1998), the last book before Macura’s death Macura focuses on the image of the Revival as an awakening (*probuzení*) from sleep or from a dream, which suggests the Lotmanian *semiosphere*, as I will note.

5. Macura's semiotics of the Czech National Revival

What was the historical background for these treatments of the Czech National Revival? I digress to discuss this very important question.

As a result of their defeat in 1621 by the Imperial forces in the Battle of the White Mountain [*Bílá hora*], the Czechs were deprived for a long period not only of their political independence, but also of much of their cultural and artistic life since after the Czechs were vanquished in 1621, all aspects of Czech culture were threatened or nearly obliterated. The Protestants were persecuted and expelled from the country, the Czech aristocracy was decimated; Czech books were burned. German and Latin replaced Czech in many cultural spheres especially in the eighteenth century, leading to the virtual obliteration of Czech as a written language. During this period, especially during the reigns of Maria Theresa (1740–1780) and of her son Joseph II (1780–1790), the Austrian empire followed a policy of intense centralization and Germanization. Joseph's educational reforms essentially Germanized all levels of the school system, including elementary schools in the Bohemian and Moravian crown lands, down to the level of village elementary schools. Czech books were no longer printed.

Nevertheless, the baroque, as a quintessentially counter-reformational artistic movement, blossomed following the Czech defeat. Magnificent architectural objects and a superb lyric tradition persisted; but by the eighteenth century Czech literature could no longer remain unaffected by the intense Germanization efforts by the Viennese court. Thus, during the late eighteenth and early nineteenth century, a Czech National Renewal (*národní obrození*) took shape, rejecting the cultural imperialism of Vienna. The Czech language, long dormant, was recodified and became again the basis of a literary tradition. Some exquisite romantic poetry by Karel Hynek Mácha, was an exception to the predominantly politicized writing, directed toward the cause of the National Revival of ethnic and linguistic identity.

Thus by the late eighteenth and early nineteenth century the Czechs regained their written language. No longer was Czech rejected, even by some Czech intellectuals, as an insignificant language reduced the unwritten vernacular of the peasants and the urban proletariat, while the elite wrote in Latin and German and often spoke only German. Two types of Czech had survived during the eighteenth cen-

tury: the archaic and conservative language of the courts, and a popular oral type, spoken primarily by the peasants and urban proletariat (cf. Havránek 1936: 80). During the National Revival during the late eighteenth and early nineteenth century, Czech was recodified first by Josef Dobrovský (1753–1829), and later again by Josef Jungmann (1773–1847). It was illustrative for the unfortunate state of Czech of that time that Dobrovský's fundamental Czech grammar was written not in Czech but in German (*Lehrgebäude der böhmischen Sprache*) (Dobrovský 1909), and that many of the language reformers themselves had only a minimal academic knowledge of the Czech language gleaned from the pages of the pre-1621 literature (cf. Havránek 1936:84). Later, however, Jungmann's works on the Czech language, *Slovesnost* [Literature] (Jungmann 1829), *Historie literatury české* [History of Czech Literature] (Jungmann 1825), and his monumental *Slovník česko–německý* [Czech–German Dictionary] (Jungmann 1835–1839), were written in Czech.

Macura saw the Czech Revival as a self-conscious process, as an intentional pedagogical design on the part of certain intellectuals, among them Josef Dobrovský and Josef Jungmann as a complexly structured sign system (cf. Janoušek 1999: 334) which led him to the notion of Revivalist culture as a game, appropriating Lotman's differentiation of "play" and "art." In play the situation is conventionally treated "as though" it were real, assuming the player "lives" in the game and follows its unconscious rules. In such a case a stuffed tiger is accepted as "pretend-true", inspiring "pretend-fear," whereas a work of art makes no such pretensions. Accordingly, Macura holds (1995: 102–103) that the National Revival was looked upon as an ideal, embodying the human ability to create something higher than reality, namely a design for striving toward the divine. But at the same time, there existed a profound pessimism, casting doubt on the human ability to achieve so lofty a goal. Could the gap between the small group of intellectual "Awakeners," and the unlettered masses be closed? For the Czech language no longer existed as a general means of communication, and thus it must have appeared to the small group of recodifiers of the Czech language that they were creating a game-like reality. As the poet Jan Kollár (1793–1852) facetiously wrote, "We play on a piano that perhaps does not have any strings" (Kollár 1952: 351 in Macura 1995: 105). Thus the contrast between play and life in Czech Revivalist culture, often seen by contemporaries as ironic and playful, or at best as naively optimistic.

5.1. Other semiotic systems of the National Revival

1. Linguocentrism

The central issue became the recodification of the Czech language and the propagation for its use in daily life in an urban population, including the intellectuals. And this led to such epithets as Czech as a philological nation (*abecedářský národ* [Šafařík]). Especially in the first half of the nineteenth century linguistic questions transcend the boundaries of linguistics and become reflections of a specific cultural and social perspective. For example, the complex Czech case system was not only seen as a morphological trait of the language, but, it took on axiological dimensions of such positive values connected to the language as musicality and harmony, in contrast to the less valued non-inflectional or part-inflectional, languages. The latter were metaphorized as a wall constructed so that the nails (the prepositions that act like case endings) are openly visible, whereas in Czech and other inflected languages, as most other Slavic ones, the nails are hidden, making for greater elegance (Macura 1995: 43). Nor was orthography seen as an arbitrary system of rendering the sounds of a language. It also became an autonomous value fused to aesthetic and political phenomena. For example, after Russia's victory over Napoleon in 1812 there were various calls on the part of the, Awakeners to adopt the Cyrillic alphabet (Jungman 1948: 155). Thus the Czech National Revival, and even much of modern Czech culture, took on a strongly metalinguistic character, and this linguocentrism is still active today, and comes strongly to the fore in the language games of the interwar Czech literary avantgarde.

2. The city — Prague

As in other European cultures, the axiology of the city begins to change during the nineteenth century. As is seen in the works of Dickens, Sue, and Balzac, the city, which until the end of the eighteenth century was valued negatively by the pre-Romantic writers who idealized the countryside, began to be valued positively, as it was by Karel Hyněk Mácha, the Czech Romantic poet *par excellence*. Mácha now praised the city's picturesque charm. Thus Mácha writes "towns like small white markers peeked out of the dark shadows; and light

smoke curled up from them” [“města, co bílá znaménka vyhlížela z šerých stínů; nad nimi se kroužil lehký kouř”] (Mácha 1961, II.210 in Macura 1995: 178). Yet the situation was different from that in other European countries, for the image of Prague enters the literature of the Revival often by the back door, by way of the little valued peripheral genres of art, the urban dramatic farce, especially Czech adaptations and/or translations of Viennese humorous folk plays. In Macura’s example, the Czech play *Alina or Prague in another Part of the World* [*Alina aneb Praha v jiném dílu světa*] by Štěpánek, was simply a free translation of the Viennese folk play by Karl Ruber, *Aline, oder Wien in einem anderen Weltteil*. Viennese localized details are simply transposed to Prague equivalents (street names, landmarks, etc.).

Macura sees Prague as having a dual sign function in this period: it is depicted both in its realities, its streets, houses and inhabitants, and as an allegory. The former function is realized on what Jakobson called the axis of combination (syntagmatic axis), indexically. In the allegorical aspect, on the other hand, elements are based on similarity, iconically (Macura 1995: 180). Allegorically Prague is personified as a female, as its Czech name, Praha, is grammatically feminine. Prague then is metaphorized as “Mother” (during the Interwar first Czechoslovak Republic, the motto “*Praha matka měst*” [Prague, Mother of Cities] was painted on the red-yellow streetcars of the city. The figure of Prague as “mother,” “bride,” “widow” (of kings) brings it near to the Revival theme of *vlast* (one’s home country, equivalent to the Russian *rodina* and the French *patrie*. Again, like its French and Russian equivalents, but unlike the German *Vaterland* (grammatically neuter, *vlast* is grammatically feminine, and is axiologically tied to the symbolism of the Czechs as a family of father, mother, and children (Macura 1995: 181)). (Fig. 2–3).

In Lotman’s terms, boundaries become signs; Prague is split into two parts, an “old” and a “new”, where “old” is identified with the allegorical (iconic) past expressed in such attributes as “old,” “venerable” (*staroslavná*), and “brave” (*chrabrá*), whereas “new” is represented by the contemporary realities of the city, its physical shape, its streets, real people, etc. In Czech mythology the allegorical aspect of the city is a meeting of this world and the divine world (Macura 1995: 183), suggesting the traditional folk image of the cosmological tree, the “tree of life”. Here Macura comes very close to the Lotmanian function of myth as a device for creating a picture of the world, and to



Figure 2. National symbols which had become established in the culture of the National Revival, had become accepted as natural and traditional in the second half of the nineteenth century. Traces of Revival culture are seen in the stylization of Prague as a sacred space, the *Macca of Czechdom*, etc. Illustration from the cover of the annual *Zlatá Praha* (Golden Prague) (1864).



Figure 3. Mother Slavia with her children. Image of the Pan-Slavic “family”. (*Humoristické listy* [*Humor Magazine*] vol. 5. 1863, p. 328).

establish an identity to distant spheres (Lotman 1990: 152). The tree of life, frequently supplanted by the image of the mountain represents the link between humans and the gods. In Bakhtin’s sense, its axiology is spatial-vertical, it moves from the bottom of the mountain, the actual reality, the bowels of the earth, man, and even lower the devil(s), upwards to the mountain summit which reaches to the ideal, the godhead. The mountain summit and Prague both are bipolar mythemes, interchangeable images and their iconographies share the metaphoricity of “cathedral,” “castle,” “crown,” “throne,” etc. (Macura 1995: 185). Similarly, the Slovak emblem are the Tatra mountains. Indeed, a specific tree, the linden tree (*lípa*) became the Czech (or Slavic) mythical tree par excellence. (Fig. 4–5).



Figure 4. The symbol of the “Slavic linden tree” arose in the first quarter of the 19th century as the opposite of the German oak. The female linden tree (the Szech *lipa* is grammatically feminine) with its soft wood, a source of honey, was opposed to the (German) oak and exploited as a central emblematic item: Slavic honey vs. bitter German acorns, Slavic busy bees vs. German parasitical drones, Slavic softness and benevolence vs. German severity and harshness, a.s.o. The illustration is by the Czech painter Mikoláš Aleš. It shows Czech cultural and political figures as the roots, and titles of Czech songs and poems as the branches of the linden.

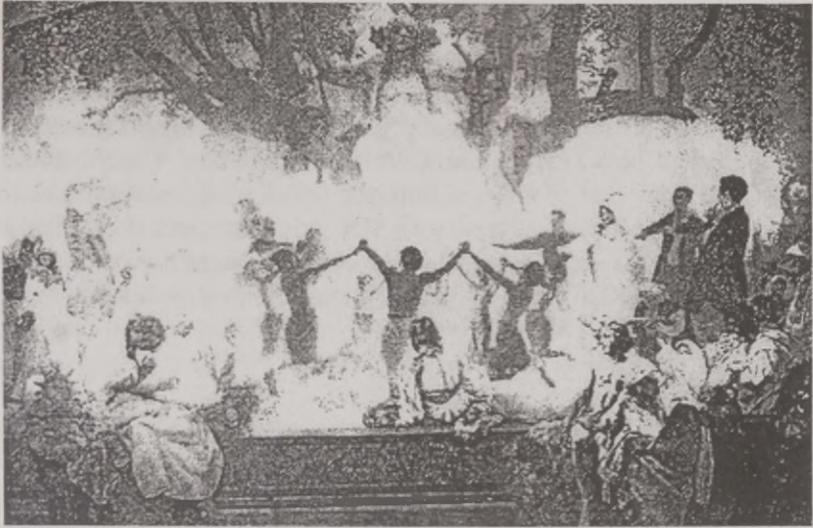


Figure 5. Alfons Mucha “Youth Under the Linden Tree” (1926).

3. The Czech nation (*národ, vlast*)

The problem of nationhood permeated the National Revival. What is a nation, and how it can be defined as something specific, was, after all, an important theme of the Romantic nationalism pervading Europe. But while it was no problem to define what characterized the German or the French nation by territory and distinctive language, the definition of what constituted Czech nationhood was far more complex. For the Czech nation could not easily be defined by language. Macura cites an anecdote involving the Czech writer Jan Neruda (1834–1889). In a Czech small town Neruda initiated a conversation with a woman innkeeper concerning a recent Czech national celebration that had taken place in this town. “Yes, the Czechs had a celebration here,” agreed the innkeeper in perfect Czech. “But there live only Czechs here,” was Neruda’s reply; “and aren’t you a Czech yourself?” “I,” replied the innkeeper, “I am neutral”. (Neruda 1961: 375–376 cited in Macura 1998: 54). To what nationality did this lady feel she belonged, asks Macura. Was it Austrian, as a subject of the Habsburg monarchy? Or did she feel that she belonged to the Kingdom of Bohemia, But the epithet *Bohemus* or *Bohemicus* did not necessarily identify a language, and could simply mean a subject of the Kingdom of Bohemia which

was part of the Habsburg empire. And this subject, especially in the cities, might more probably speak German than Czech. A Czech could also be called a German, even a Czech speaking peasant, as a subject of the Holy Roman Empire. Similarly, the German label *Böhme* could be applied to both German and Czech speakers. But “Czech” could also be seen as part of a larger unit, the world of the Slavs (*Slovanství*). The association of *Czech* with *Slav* led to attempts at creating a universal Slavic language (e.g. Jan Herkel’s *Elementa universalis linguae slavicae* (1826), and Kollár’s notion of Slavic Solidarity (*Slovanská vzájemnost*) (Macura 1995: 157).

4. Smallness: the new ideal of nationhood

The view of Czechs as part of a larger unit, Slavdom, was weakened by the appearance of an article by the Czech historian Erazim Vocel (1864). It appeared in the *Journal of the Czech Museum (Časopis Českého Muzea* in its 20th volume, entitled “The Estonian Learned Society in Derpt” (Učená společnost estonská v Derptu”) (Derpt is today’s Tartu). The article was a paraphrase of some texts in the Estonian Learned Society’s *Verhandlungen der gelehrten estnischen Gesellschaft*. Two points strike us. The first is that the language of the *Verhandlungen* is not Estonian but German, thus a situation analogous to that in the Czech lands through the early period of the National Awakening. The second interesting matter is Vocel’s choice of texts in the Estonian journal for paraphrasing, namely two historical essays in German by D. H. Jürgensen one on the Estonian language and the second one on Estonian literature, “Über die Entstehung der beiden Hauptdialekte der estnischen Sprache” and “Kurze Geschichte der estnischen Literatur” (1846: I: 19–25; I I: 41–52; I I I: 61–73). It is clear why Vocel chose just these two texts and added to them two translations from the German translation of two Estonian folk texts, (“Wannemunna’s Sang” and “Koit and Hämarik”) while omitting other learned articles on historical topics and other fields. This choice was clearly engendered by the interest in the late Czech National Revival of questions of the nature of national languages and the related fields of literature and oral art. Vocel knew German but not Estonian, nor could he have had any knowledge of Estonian literature and folklore, but he enthusiastically foretold a great future for the reawakening of Estonian culture, in which he saw a promising analogy to the Czech situation.

Hence an enthusiasm for the culture of a nation, even smaller than the Czechs, took precedence over the desire of Czech intellectuals to identify with a larger body of related cultures, all of Slavdom, that had dominated Czech Revivalist thought in the early decades of the nineteenth century. It was not only Estonian culture that fascinated the Czechs now, but they began to identify with other smaller nations rebelling against foreign dominance, namely the Irish, the Basques, the Flemish, and the Greeks. This new self-identification of the Czechs with other small nations expressed changed values in which the powerful attributes of largeness were gradually displaced by those of the spirituality, modesty, simplicity of the cultures of small ethnic groups (Macura 1995: 166). The positive value of the concept of the “Middle” (*střed*) evolved with the process of the creation of a Czech philosophy, akin to Herder’s concept of the golden middle (“*die goldene Mitte*”). For the Czech historian František Palacký the Czech nation mediated between and bridged East and West (Palacký 1848). Such notions continue to characterize the Czech nation as moderate and eschewing the radical extremes which still has significance today.

5. The mythological function of nature: animals and plants

Macura semiotized properties of the Czech Revival culture such as the axiological function of flowers, plants, trees, and animals (Macura 1995: 20–30). The medieval flower symbolism was transformed in the nineteenth century language of sentiment and love of the *Biedermeier* period, similar to other European cultures. Just one example must suffice here: the oriental flower symbolism of the rose as a symbol of perfection and love was taken over by Christian medieval iconography as the sign of the Holy Grail, the heart of the Virgin Mary and, in general, as a metaphor for the Holy Virgin. This metaphor and other oriental flower metaphors became secularized and eroticized in the Czech literature of the National Revival (the rose as a metaphor for love and the lily as a sign for innocence). The Czech identification of the red of the rose and the white of the lily with Red and White combination of the Czech national colors (Macura 1995: 22) become a strong extended metaphor for Czechness. Furthermore, in the National Revival two animal and plant species conveyed the idea of Slavdom and of Czech identity, namely the dove (*holub*) and the linden tree (*lípa*). For the Czech Revival the dove was a Slavic symbol, and the abundance of pigeons on

Venice's St. Mark's Square was seen as evidence of an earlier Slavic influence. And this lead Czech writers to such pseudo-etymologies that related the Czech word *holub* to the Slavic stem *-ljub-* (love-), as is done by Jan Kollár in a special study which connects *ljub*(love) to the dove (*holub*), e.g. *holub* > *holjub*, *holub* > *spoljub* (mutual love) (Kollár 1862: 329–348 in Macura 1995: 90.)

Among the plants, it is the linden tree (*lípa*) that became an important symbol for Slavdom, and especially for Czechness, as it is to this day, creating such expressions as *ceská lípa* (the Czech linden tree). (Fig. 4–5). The Czech feminine gender for the linden tree (*lípa*) are bonded to many of the attributes ascribed to the dove (gentleness, sweetness, peace). In Czech Revivalist literature the linden tree is often opposed to the oak with its Czech masculine gender (*dub*), signifying Germanness, not only in Czech but also in German mythology (*die deutsche Eiche*, *Er ist deutsch wie eine Eiche* /the German oak, he is German as an oak). In Kollár's epic poem *Slávy dcera* (Sláva's Daughter) (Kollár 1832)⁵, and even earlier, at the beginning of the nineteenth century. Macura quotes the Czech writer Václav Stach as writing as early as 1805 (1805: 15) "The oak is a shade giver and ornament of the German fortune teller (*věštec*). Cannot then the linden tree be that of the Czech soothsayer? (Macura 1995: 91). Here we can see an early example of Jakobson's semantization of grammatical morphology in his example from Heine's poem "*Der Fichtenbaum und die Palme*" [The Fir Tree and the Palm Tree] which he cites in his "The Grammar of Poetry and the Poetry of Grammar" (Jakobson: 1981). As Jakobson notes, Heine here suggests an erotic relation between the two trees the grammatically masculine fir tree (*Der Fichtenbaum*) and the grammatically feminine palm tree (*die Palme*) interact erotically. To strengthen this idea, Heine chose to name the fir tree not by its common German name, *die Fichte*, which is feminine, but chose the combination with the masculine *-baum* which makes the entire compound noun masculine. The same grammatical semantization is cited by Jakobson in his discussion of the Russian *bylina* about "Vasilij and Sofija," in which a cypress (R. Masculine noun *kiparis*) and the willow tree (R. Fem. *verba*) grow out of Sofija's and Vasilij's graves respectively, and "wove together with their heads? And stuck

⁵ As Měšt'an points out (1984: 69), Kollár uses a conscious "Revivalist" etymology. The noun *sláva*, in Czech and Slovak, as well as in other Slavic languages, has the meaning of *glory*. And for Kollár and other writers of the National Revival, the etymology of the word for Slav (*Slovan*) is derived from this Slavic root for glory, *fame*.

together with their leaves.” (Jakobson 1981: 92). Macura notes (1995: 91) that this semantization still exists in some rural areas of Bohemia and Moravia where an oak is planted at the birth of a boy, and a linden tree at the birth of a girl. Furthering the thesis of feminine ideal for Czechness, Macura notes the frequency of the figure of the Czech amazon fighting for freedom in the 1848 revolution, a theme which became a favorite of illustrators in the Czech press, frequently with striking similarity to Delacroix’s famous amazone picture. (Fig. 6–7).

The opposition linden tree / oak tree for Czechness or Slavdom in general vs. Germanness is accompanied by secondary semantizations that also model the same dichotomy of Czech vs. German. For the Czech/Slavic side, they are honey (sweetness), the bee (as the producer of sweetness with a secondary semantization of industriousness (Cz: *píle*, also of feminine gender)) on the Slavic side, and the bitter acorn and aggressive boar on the German side. Macura develops the following model of the Czech–German opposition (1995: 92):

Slavic (Czech)		German
the linden tree (<i>lipa</i> , fem.)	Female vs. Male principle softness vs. hardness Peace loving vs. Aggressive	oak (<i>dub</i> , masc.)
honey	sweetness vs. bitterness	acorn
bee (<i>včela</i> , f., <i>píle</i> , f.)	Industrious vs. Aggressive	boar (<i>kanec</i> , m.)

6. Czech “dreams” of the Revival period

In his last book, *The Czech Dream* (*Český sen*) (1998), Macura returns again to his pivotal topic of the Czech National Revival, which he semiotizes by another opposition, that of sleep-dream (*sen*) vs. awakening (*probuzení, buditel*⁶). Here Macura analyzes fifteen Czech myths (he calls them “dreams about...”), and in the Introduction and Conclusion, he provides a meta-analysis of the Czech Revival Movement, often shown as characterized by the artificiality of a dream. In the Introduction, he demonstrates how the “Czech Dream” of nationhood in the National Revival extends into the “dreamings” of the Interwar first Czech Republic under Masaryk, and how this “dream” is

⁶ The leaders in the National Revival movement were also called *buditele* [Awakeners]



Figure 6. Amazone on the barricades under the Charles Bridge Tower on the Old Town side in Prague. From a leaflet of 1948.



Figure 7. The mythical Czech amazon, Vlasta. Painting by Josef Navrátil.

shifted into a new semiotic model after the communist putsch of 1948. As we have seen, the “dreaming” of the time of the Awakening was a sign of a transition towards a Czech national identity defined in contrast to German culture; Macura’s analogy is the “dreaming” after the communist putsch of 1948 of the communist ideology, which is always presented as a transition to the ideal society of communism. This new “dreaming” revalued the anti-Germanism of the National Revival into the image of the hostile imperialist war-mongering West, while the Slavophilism of the Awakening was transformed into Russophilism or Sovietophilism (Macura 1998: 11–12).

Today the Czechs are again striving for a national identity, and the “bridge” is replaced by a desire for becoming part of the European Union on Czech independent terms. And Estonia also shares this new dream. In both cases, then, the search for a national identity is cast in quite new terms.

Macura, like a poet, has the ability to treat metaphorically relationship that are not always noted so clearly, and then they become a semiotic documentation of Czech culture since the Habsburg monarchy to our days.

References

- Bogatyrev, Petr 1936,1971. *The Functions of Folk Costume in Moravian Slovakia*. The Hague: Mouton.
- Frazer, George 1925. *The Golden Bough. A Study in Magic and Religion*. London: Macmillan.
- Gelehrte estnische Gesellschaft 1846. *Verhandlungen*. Dorpat (Tartu). Vols. I–III.
- Herkel, Jan 1826. *Elementa universalis linguae slavicae*. Praha.
- Jakobson, Roman with Jurij Tynjanov 1928. Problemy izucenija literatury i jazyka. *Novyj LEF*. Moscow.
- 1981. The poetry of grammar and the grammar of poetry. *Selected Writings III*: 87–97.
- Janoušek, Pavel 1999. Ten, který byl... Vladimír Macura. 7.11.1945–17.4.1999. *Česká literatura* 3199: 333–136.
- Jungman, Josef 1948. *Boj o obrození národa* [The Struggle for the Reawakening of the Nation]. Ed. Felix Vodicka. Praha.
- Kollár, Jan 1832. *Slávy dcera. Lyricko-epická báseň v pěti zpěvech*. [Sláva's Daughter. A Lyrical-Epic Poem in Five Cantos]. Pest.j
- 1862. *Cestopis obsahující cestu do Horní Italie a odtud přes Tyrolsko a Bavorsko se zvláštním ohledem na slavjanské živly roku 1841 konanou. Se slovníkem slavjanských umělcův všech kmenův*. [A Travel Description of a Trip to Upper Italy and from There By Way of the Tyrol and Bavaria With special Emphasis on Slavic Elements, Undertaken in the Year 1841. With a Dictionary of the Names of Slavic Artists of All Tribes]. Praha.
- 1952. *Básně. Vybrané spisy I*. Praha.
- Lotman, Jurij M. 1990. *Universe of the Mind. A Semiotic Theory of Culture*. Bloomington: University of Indiana Press.
- Mácha, Karel Hyněk 1961. *Próza. Spisy II*. (Ed. K. Janský et al). Praha.
- Macura, Vladimír 1993. *Masarykovy boty a jiné semi(o)fejetony*. (Masaryk's Boots and Other Semi(o)feuilletons). Praha: Pražská imaginance sv. 272).
- 1995. *Znamení zrodu. České národní obrození jakop kulturní typ* (Signs of Birth. The Czech National Revival As a Cultural Type). Nové rozšířené vydání. Praha (H & H). (1st edition 1980).
- 1998. *Český sen* (The Czech Dream). Praha: Lidové noviny.
- Měšt'an, Antonín 1984. *Geschichte der tschechischen Literatur im 19. und 20. Jahrhundert*. Köln: Böhlau (Bausteine zur Geschichte der Literatur bei den Slaven. Vol. 24).
- Mukařovský, Jan 1934. K českému překladu Šklovského Teorie prózy. *Čin VI*: 123–30.
- 1936 *Estetická funkce, norma a hodnota jako sociologický fakty*. Praha.
- Neruda, Jan 1961. Přes Heřmanův Městec. *Menší cesty. Spisy Jana Nerudy IX* (ed. Aleš Haman.) Praha.

- Palacký, František 1848. *Dějiny národu českého v Čechách a v Moravě dle původních pramenů* [History of the Czech Nation in Bohemia and Moravia according to Original Sources]. I. Praha.
- Prague Linguistic Circle, Theses 1928. Thèses présentées au premier congrès des philologues slaves. *Travaux du cercle linguistique de Prague* I: 5–29.
- Stach, Václav 1805. *Starý veršovec pro rozumnou kratochvíli* [Old Versebook for Reasonable Entertainment]. Praha.
- Vocel, Jan Erazim 1864. Učená společnost estonská v Derptu. *Učená správa II. Časopis Českého Muzea* 20: 264–270.
- Winner, Thomas. 1995. Prague structuralism and semiotics: Neglect and resulting fallacies. *Semiotica* 105(3/4): 243–275.

Чешская и Тартуско–Московская семиотика: культурная семиотика Владимира Мацуры (1945–1999)

Среди национальных научных групп деятельность Пражского лингвистического кружка была наиболее сходна с работой Московско–Тартуской школы. В данной статье исследуется работа одного из самых неутомимых современных чешских интерпретаторов лотмановской школы Владимира Мацуры, чьи труды по чешской литературе и истории представляют собой замечательный пример отзвуков лотмановской семиотики в Чешской Республике. Это особенно касается переоценки Мацурой текстов чешского национального возрождения конца 18 – начала 19 веков, особенно в книгах “Знаки рождения” (1995) и “Чешский сон” (1998). В этих работах Мацура рассматривает этот критический период чешской национальной истории как многослойный семиотический текст и в вербальной, и в визуальной сферах. Настоящая статья представляет попытку исследования такого подхода Мацуры к чешскому языку, городу Праге, к проблеме чешской национальной самоидентификации в целом и, как части более широкой категории, славянского мира. Особое внимание уделяется исследованию Мацурой ценностных функций символических животных и растений в культуре чешского Возрождения в соотношении с аксиологией чешской (славянской) культурной идентичности. Статья посвящена памяти Мацуры.

Tšehhi ja Tartu–Moskva koolkonna semiootika: Vladimír Macura (1945–1999) kultuurisemiootika

Rahvuslike teaduskoosluste hulgast oli Praha lingvistikaringi tegevus kõige sarnasem Tartu–Moskva koolkonna suunitlusega. Artiklis vaadeldakse tänapäeva Tšehhi ühe kõige väsimatuma Lotmani koolkonna interpreteerija Vladimír Macura tegevust, kelle tööd tšehhi kirjanduse ja ajaloo alalt kujutavad endast suurepäraselt näidet lotmanliku semiootika mõjuväljast Tšehhi Vabariigis. Eriti puudutab see Macura-poolset tšehhi rahvusliku ärkamisaja tekstide ümberhindamist, eelkõige raamatutes “Sünnimärgid” (1995) ja “Tšehhi unenägu” (1998). Neis tekstides vaatleb Macura seda tšehhi rahvuse ajaloo kriitilist perioodi kui mitmekihilist (nii verbaalses kui visuaalses sfääris) semiootilist teksti. Artiklis lahatakse Macura semiootilist lähenemist tšehhi keelele, Praha linnale, tšehhi rahvusliku enesemääramise probleemile tervikuna ja, laiemalt, slaavi maailmale. Erilist tähelepanu pööratakse Macura uurimusele sümbolsete loomade ja taimede väärtusfunktsioonidest tšehhi ärkamisaja kultuuris, suhestatuna tšehhi (slaavi) kultuurilise identiteediga. Artikkel on pühendatud Macura mälestusele.

От “словообразов” к “главокадрам”:
Имажинистский монтаж
Анатолия Мариенгофа

Томи Хуттунен

Dept. of Slavonic and Baltic languages and literatures,
P.O. Box 4 (Vuorikatu 5B), 00014 University of Helsinki,
e-mail: tomi.huttunen@helsinki.fi

Abstract. From “word-images” to “chapter-shots: The imaginal montage of Anatolij Mariengof. The article discusses the three dominant imaginal principles of Anatolij Mariengof’s (1897–1962) poetic technique, as they are translated into prose in his first fictional novel *Cynics* (1928). These principles include the “catalogue of images”, a genre introduced by Vadim Shershenevich, i.e. poetry formed of nouns, which Mariengof makes use of in his longer imaginal poems. Another dominant imaginal principle, to which Mariengof referred in his theoretic articles and poetic texts, is similar to the creating of shocking images typical of Russian futurism. Mariengof’s application is the juxtaposition of “pure” (*chistyj*) and “impure” (*nechistyj*), either a conflict between the vehicle and the object within a metaphor or a conflict between metaphors. This is an essential poetic feature in both Mariengof’s poetry and prose. The third, maybe the most Mariengofian imaginal principle, relevant to the study of *Cynics*, is the poetics of transition (*poetika sdviga*), i.e. a certain fragmented structure of the text, which is related to Mariengof’s use of heteroaccentual rhyme. All these principles can be treated as fundamental elements in Mariengof’s use of montage technique in his fictional prose.

*Если кому-нибудь не лень — создайте философию
имажинизма, объясните с какой угодно глубиной
факт нашего появления. Мы не знаем, может
быть, оттого что вчера в Мексике был дождь,
может быть оттого что в прошлом году у нас*

ощеллась душа, может быть, еще от чего-нибудь, — но имажинизм должен был появиться, и мы горды тем, что мы оруженосцы, что нами, как плакатами, говорит он с вами.

Декларация 1919 г. (Цит. по ПИ 1997: 10.)

Вопрос об имажинизме в советской прозе 1920-х годов долгое время оставался без внимания, как и многие другие аспекты деятельности этой литературной группы. Снискав славу возмутителей спокойствия, имажинисты чаще всего интересовали историков русской литературы не столько художественным качеством своих произведений, сколько эпатажностью поэзии и поведения, а также декларативными текстами и, в дальнейшем, мемуарами¹. По нашему мнению, этот вопрос (как и вся история имажинизма) представляется заслуживающим большего внимания, чем ему уделялось до сих пор. При этом следует учитывать, с одной стороны, постепенно увеличивающийся интерес к имажинизму, а с другой стороны, некоторые общие признаки послереволюционной советской культуры, которые отражаются в теории и практике (в стихах и в быту) этой малоизвестной литературной группы. На наш взгляд именно несоответствие поведения и текстов, оказавшееся наиболее существенным с самого начала существования имажинизма, могло бы объяснить не претерпевший изменений противоречивый интерес к мемуарам имажинистов.

Нилс Оке Нилссон в своей пионерской работе о русском имажинизме *The Russian Imaginists* приходит к выводу, что прямого влияния имажинизма на прозу не существует². Отчасти об этом свидетельствует аналогичная имажинизму т.н. орнаментальная проза этого времени. Действительно, не составит труда найти аналоги имажинистской поэтики в произведениях И. Бабеля, А. Белого, Б. Пильняка, Е. Замятина или Г. Газданова³, — и

¹ Имеются в виду прежде всего воспоминания А. Б. Мариенгофа, недавно вышедшие в одном томе (Мариенгоф 1998) в соответствии с авторской волей и по-прежнему вызывающие резкие оценки критиков (в особенности это касается *Романа без вранья*, 1926).

² По его мнению, вопрос об имажинизме в прозе не уместен, т.к. роль образа широко обсуждалась в русской литературе 1920-х гг. вне имажинистского контекста (см. Nilsson 1970: 92).

³ О подобных аналогах см., например, Schreurs 1989: 117, Кабалоти 1998: 320–321. Георгий Устинов в свою очередь охарактеризовал Пильняка, Вс. Иванова, Зощенко и Никитина как продолжателей имажинизма в прозе (см. Markov 1980: 110).

список этот можно было бы продолжить. В данном случае имажинизм понимается узко: прежде всего, как гиперболизм, насыщенность образностью или “самоцельность” образов, что декларировалось членами группы в 1920 году (см. Шершеневич 1920: 18). Вопрос о влиянии имажинизма на прозу представляется нам частным случаем более крупного, по характеру интерсемиотического культурного явления — т.н. монтажного мышления 1910–20-х годов.

Что касается прозы Анатолия Мариенгофа (1897–1962), мы не можем не учитывать влияния поэтики школы на одного из основоположников школы и главных экспериментаторов имажинистской акробатики (наряду с Вадимом Шершеневичем). С другой стороны, вряд ли уместно говорить о собственно имажинистской прозе, игнорируя тексты Мариенгофа. Имажинизм мариенгофской прозы во многом определяется концепцией монтажа, охватывающей разные явления авангардистской культуры 1920-х годов. Имажинисты занимались монтажной поэзией, как и другие представители авангарда. И все-таки именно в этой группе была создана развернутая теория монтажной поэзии⁴.

Если следовать широко распространенному пониманию литературного монтажа как внешней фрагментарности, его можно рассматривать как очевидную особенность мариенгофской прозы в целом. Мемуары Мариенгофа могут читаться как произведения, где под мнимой случайностью сцепления разных воспоминаний — т.е. под естественно фрагментарным восприятием истории, — скрывается глубоко мотивированный подбор фактов, некий мон-

⁴ Имажинисты ни разу не упоминают термин “монтаж” в своих работах, что, как нам кажется, свидетельствует прежде всего о распространенности т.н. монтажного мышления в русской культуре первой половины XX в. (см. Иванов 1988, Булгакова 1988). О монтажности в авангардистской поэзии см. Тименчик 1989 и Schaumann 1985. Об имажинизме в этой связи см. Nilsson 1970: 66–73, Kosanovic 1987 и Lawton 1979; 1993. Стоит также отметить другую группу, крайне маргинальную в русском контексте несмотря на свое широко известное название, — недолговечный пост- или околоимажинистский “экспрессионизм” (1919–22). Его лидером был молодой поэт Ипполит Соколов, который позднее работал в кино и в 1926-м году выпустил книгу *Киносценарий — теория и практика*. “Кружок” Соколова (И. Грузинов, С. Спасский, Е. Габрилович и др.) был “экспрессионизмом с имажинистской доминантой”. В своем “Бунте экспрессиониста” (1919) Соколов обвиняет имажинистов в “гиперболизме” и “плохом футуризме” — экспрессионизм он объявил “синтезом всего футуризма”, заявив следующее: “Только мы, экспрессионисты, сможем осуществить [...] динамику нашего восприятия и динамику нашего мышления” (см. Терехина 1998: 51–55).

тажный принцип, напоминающий композицию “записных книжек”, — в первую очередь, Вяземского (см. Гинзбург 1929: 42).

Тем не менее, сопоставление монтажа с фрагментарностью отсылает к слишком широкой для того, чтобы реконструировать суть теории монтажной поэзии имажинистов, проблематике. Определение монтажности текста требует уточнения. В русских теориях монтажа внимание уделяется определению монтажного элемента. Вслед за С. М. Эйзенштейным (не игнорируя при этом работ других теоретиков кино — Д. Вертова, Л. Кулешова, В. Пудовкина или Ю. Тынянова) можно ввести некоторое обобщающее определение, подчеркивающее *относительную автономию* отдельно взятых элементов, их *поливалентность* и *смысловой потенциал*, который реализуется лишь при *сопоставлении* с соответствующими элементами. В пространстве текста данный элемент часто оказывается многофункциональным, способным к сцеплению с разными элементами и к порождению новых смыслов.

В монтажном тексте подбор фактов и разнородных элементов, их организация в смысловое целое оказывается значимым приемом, — например, в работах Дзиги Вертова. Если сопоставить идеи Вертова с эйзенштейновской теорией монтажа, мы обнаружим, что в его работах подчеркивается риторическая способность документального кинематографа и монтажной организации материала менять наше видение мира⁵. Риторика Эйзенштейна, со своей стороны, основывается на резких столкновениях и процессуальном соотношении авторской фрагментации и читательской интеграции⁶. В общем и целом, здесь можно выявить три основных типа русского монтажа: кулешовский нарративный (монтаж сцепления), эйзенштейновский манипулятивный (монтаж столкновений⁷), и вертовский риторико-трансформативный

⁵ Критик русского монтажа Андре Базен ставит под сомнение риторическую основу документов Вертова: “У зрителя возникает иллюзия, будто перед ним бесспорное в своей очевидности доказательство, в то время как в действительности это лишь серия двусмысленных фактов, сцементированных только словами комментатора” (Цит. по Соколов 1988: 35–36). См. также Tupitsyn 1992: 87.

⁶ См. Эйзенштейн 1964: 163.

⁷ Как известно, Эйзенштейн выделяет всего четыре или пять типов монтажа (метрический, ритмический, тональный, обертоновый), но здесь мы остановимся лишь на тех чертах его теории, которые так или иначе сопоставимы с другими вариантами русских теорий монтажа.

(монтаж интервалов⁸). Последний тип в большей степени, чем остальные, представлен в воспоминаниях Мариенгофа и прежде всего в его первой книге художественной прозы, — монтажном романе *Циники*, написанном в форме дневника. Тем не менее, в этом романе можно найти и яркие отголоски эйзенштейновского монтажа, подчеркивающие столкновение сопоставимых элементов. Как мы попытаемся доказать в дальнейшем, это сопряжено именно с имажинистскими особенностями романа.

Имажинистская теория монтажной поэзии строится на двух основных принципах. Первый из них — “каталог образов”, номинативная поэзия без глаголов. Ее главным теоретиком и практиком является Шершеневич, хотя ее влияние можно также обнаружить в поэмах и романах Мариенгофа. Второй околофутуристический принцип — конфликт внутри языкового образа и между образами (столкновение “чистого” с “нечистым”) — характеризует поэзию и прозу Мариенгофа.

В своих манифестах имажинисты заявляют о том, что в поэзии образ является самоцелью, а также что образность языка содержится в существительных. Шершеневич воспринимает образность как органичную часть русского языка:

В самом деле, в русском языке образ слова находится обычно в корне слова [...] Слово вверх ногами: вот самое естественное положение слова, из которого должен родиться новый образ. Испуганная беременная родит до срока. Слово всегда беременное образом, всегда готово к родам. (Шершеневич 1920: 39).

В этом метафоричном жаргоне интереснее всего идея о стихотворной единице, несущей смысловой потенциал — “беременном слове” или “словообразе”. В теории Эйзенштейна она соотносится с кадром, относительно автономным элементом, окончательное значение которого устанавливается при сопоставлении с другими соответствующими элементами. Ведь одна из основных идей теории Эйзенштейна (1964: 158) заключается в том, что возникающий новый смысл при сопоставлении двух фрагментов является не их суммой, а *произведением* в мыслях воспринимающего. Монтажный текст следует понимать как участника взаимодействия — некое устройство, рассчитанное на читателя с “монтажным мышлением”. Для имажинистов поэзия есть искус-

⁸ О теории интервалов в связи с Вертовым и Эйзенштейным см. Michelson 1992.

ство самоориентируемых слов или “словообразов”, а стихотворный текст — всегда цепь образов, возникающая в мыслях читателя при восприятии текста.

Имажинистская “революционная” борьба против грамматики направлена на уничтожение глаголов. Восприятие поэзии без глаголов требует от читателя активного участия, т.к. необходимая предикация происходит лишь при взаимодействии текста с читателем. Таким образом, здесь мы сталкиваемся с проблематикой монтажных метафор: “родится глагол, процесс из сопоставления двух результатов: начального и конечного, например, кинофеномен как мы его описали из двух рядом стоящих клеток. Или практика китайского иероглифа, которая дает понятию *действия* “подслушивать” родиться из столкновения двух (существительных) предметов: *изображения* “двери” и *изображения* “уха””. (Эйзенштейн 1964: 429). Как было отмечено Нилссоном, имажинисты использовали разные возможности русского языка для построения безглагольных предложений: нулевую связку, опущение глагола, краткие прилагательные, компаративные формы, конструкции с управлением в творительном падеже, предлоги (при употреблении глаголов движения), наречия или междометия (см. Nilsson 1970: 88–91). Таким образом, здесь нет принципиального лингвистического новаторства, поскольку члены группы концентрируют внимание на одной из особенностей русского языка — возможности выражать сказуемость, не употребляя глаголов.

Имажинистский каталог образов также является одной из основ монтажной композиции *Циников*. Роман представляет собой сборник разнородных, кажущихся не связанными друг с другом текстовых фрагментов и может быть прочитан как прозаический аналог каталога образов, где “словообразы” выстраиваются как “главокадры”. С точки зрения целого произведения (стихотворения или романа), поливалентность и многофункциональность “словообраза” и “главокадра” тождественны. Реконструкция соотношений фрагментов и порождение при этом нового смыслового уровня, т.н. “третьего”, является задачей для читателя, активного участника смыслопорождения текста.

Что касается взаимоотношения языков прозы и поэзии, стоит отметить еще одну особенность мариенгофской поэзии, которая переводится на язык прозы именно в *Циниках*. Это т.н. “поэтика сдвига”, на которую обратил внимание В. Ф. Марков (1983), изучая проблематику разноударной рифмы в стихах Мариенгофа.

Например, в поэме *Магдалина* Мариенгоф использует удаленные друг от друга (часто разноударные⁹) рифмованные пары, что безусловно усложняет чтение текста, но вместе с тем подчеркивает монтажность композиции поэмы. Здесь выявляется идея о памяти текста и его способности напоминать с помощью повтора, а также существенная с точки зрения монтажа идея о чередовании фрагментации и интеграции. В этом можно усмотреть одну из существенных особенностей мариенгофской поэзии¹⁰. Аналогичные решения находим в *Циниках*, рассматривая соотношения удаленных друг от друга фрагментов или отдельных изображений. Эти рассыпанные части текста сцепляются по принципу текстовой организации далекого расстояния.

На уровне соотношения фрагментов *Циников* наиболее яркий пример “поэтики сдвига” отмечается в мотиве “декапитуляции”, тематически многофункциональном рассказе об оторванных головах. У этого повторяющегося мотива несколько разных функций, связанных прежде всего с кинематографичностью текста¹¹.

Любопытное проявление имажинизма и “поэтики сдвига” в прозе Мариенгофа — нарративный характер относительно автономных изображений. Определенные повторяющиеся образы-мотивы сцепляются в романе как рассыпанные детальное изображения. Наиболее яркие примеры этого — вариативные описания персонажей. По сути дела, все образы персонажей строятся по принципу монтажного немого кино: они изображены метонимически с помощью ассоциативных деталей, при этом задача читателя — реконструировать цельные образы из этих рассыпанных частей. Например, изображение большевика Сергея, брата и соперника по любви Владимира, оказывается своего рода повествовательным текстом, отражающим отрицательное отношение рассказчика к своему брату:

⁹ См. Марков 1983: 255, где перечисляются все разноударные рифмы в т.ч. *Магдалины*.

¹⁰ По мнению Маркова (там же: 241), именно Мариенгоф избавил разноударную рифму от “упреков” в том, что она редко встречается и не играет существенной роли в русской поэзии. В связи с этим исследователь попытался доказать, что на изобретательном использовании данного приема “стоит прочно почти вся его поэзия” (там же: 243).

¹¹ Подробнее об этом см. нашу статью Хуттунен 1998: 232–233.

У Сергея веселые глаза [...] оттопыренные уши [...] голова с синими глазами полетит [...] Во всю правую щеку [...] розовое пятно [...] вроде лохматого большого пса. (Мариенгоф 1928: 13–14).

Он опять похож на большого уродового пса [...] Розовое пятно на щеке Сергея смущенно багровеет (там же: 30–31).

Он кажется мне загадочным, как темная, покрытая пылью и паутиной бутылка вина в супручной феске (там же: 35).

[...] на голову Сергея, прыгающую в плечах, как сумасшедшая секундная стрелка (там же: 97).

[...] голова Сергея, разукрашенная большими пушистыми глазами, беспрестанно вздрагивает, прыгает, дергается, вихляется, корчится. Она то приседает, словно на корточки, то выскакивает из плеч наподобие ярмарочного чертика-пискуна (там же: 105.)

По этому образцу все персонажи описываются с помощью деталей-доминант: голова Сергея; ладони (“которыми хорошо забивать гвозди”) нэпмана Докучаева, бьющего свою жену; глаза героини Ольги (“серая пыль” — признак, который к концу романа, к моменту ее самоубийства, исчезает); босые ноги служанки Марфуши, “восторженная слюна” тов. Мамашева и т.д. То же самое касается случайных второстепенных изображений людей, часть из которых существуют лишь как метонимические эпитеты: “сопящие носы”, “потеющие шеи”, “черные ниточки” (вместо ног) и т.д. С помощью повтора строится галерея рассыпанных по всему произведению доминантных черт, по которым активный читатель должен реконструировать образы персонажей. Аналогичный прием широко использовался в немом кино — образ человека был раздроблен в монтаже и превращен в знаковую цепь¹².

Общемодернистскую идею о новом восприятии художественного текста Мариенгоф понимает достаточно агрессивно (отчасти по-эйзенштейновски), выявляя в своей статье “Буян-Остров” (1920) манипуляторскую функцию поэзии и подчеркивая тем самым монтажную цельность имажинистского текста:

Одна из целей поэта: вызвать у читателя максимум внутреннего напряжения. Как можно глубже всадить в ладони читательского восприятия занозу образа. Подобные скрещивания чистого с нечистым служат способом заострения тех заноз, которыми в должной мере щетинятся произведения современной имажинистской поэзии [...]

¹² См. Эйзенштейн 1964: 170, 310. Ср. Лотман (1973: 112): “Способность кинематографа разделить образ человека на “куски” и выстроить эти сегменты в повествовательную во временном отношении цепочку превращает внешний облик человека в повествовательный текст”.

Предельное сжатие имажинистской поэзии требует от читателя наивысшего умственного напряжения — обретенное памятью одно звено из цепи образов разрывает всю цепь. Заключенное в строгую форму художественное целое, рассыпавшись, представляет из себя порой блестящую и великолепную, но все же хаотическую кучу, — отсюда кажущаяся непонятность современной образной поэзии. (Мариенгоф 1997: 36).

Активное участие читателя в смыслопорождении текста тесно связано как с выбором максимально эпатирующих сопоставлений, так и с “предельным сжатием” структуры текста, заставляющим воспринимающего (пользуясь терминологией, соответствующей выбранной нами точке зрения, — имплицитного читателя, несущего монтажное мышление) реконструировать синтетические смыслы, вложенные автором в текст. Изучая поэтичность мариенгофской прозы, Й. Й. ван Баак (Van Baak 1997: 268) видит имажинизм *Циников* именно в его образности, в т.н. “поэтике занозы”, подчеркивая тем самым тот важный факт, что в прозе имажинистская акробатия всегда подчинена сюжетной структуре и неизбежно сталкивается с конкретным контекстом. Действительно, постоянное эпатирующее сопоставление “чистого” с “нечистым” является одной из наиболее ярких особенностей образов романа. В мыслях рассказчика Владимира положительное и прекрасное сопоставляется с чем-то отвратительным: цветы — с оторванными головами, возвышенные чувства — с гигиеническими проблемами, любовь — с клизмой:

Любовь, которую не удушила резиновая кишка от клизмы, — бессмертна. (Мариенгоф 1928: 21).

В романе объекты описываются сравнениями, а возникающие в результате образы чаще всего оказываются отвлеченными от исходных элементов (как изображающего слова, так и изображаемого объекта), что соответствует имажинистским представлениям об “образе как самоцели”, но одновременно свидетельствует о монтажном начале мариенгофского имажинизма¹³.

Помимо имажинистских особенностей *Циников* — композиции по принципу каталога и образного языка романа, — существует другой любопытный историко-литературный аспект его монтажа, связанный с фактографизмом. Эта околофутуристская

¹³ Ср. представление “третьего” у Эйзенштейна (1964: 158). По его мнению, образ всегда качественно отличается от сопоставимых элементов.

линия представляет собой определенную пост-имажинистскую фазу творчества Мариенгофа. В соотношении вымысла и факта (гетерогенных фрагментов) скрыта особая динамика романа. Хотя Мариенгоф, насколько нам известно, не участвовал в работе т.н. “фактовиков”, его связь с утилитаристскими тенденциями ЛЕФа очевидна. Из ряда документов следует, что в 1928-м году — во время создания *Циников*, — он пытался организовать (вместе с Рюриком Ивневым) литературную ассоциацию “Литература и быт”. В докладной записке, поданной в НКВД, заявляется следующее:

Повесть, рассказ, роман, поэма требуют обязательной увязки с реальным материалом, вне которого немислима советская специфика [...] Получаемые в результате такой работы на реальном материале произведения значительно выше и художественнее в социальном значении произведений, написанных исключительно по “вдохновению”. (Цит. по Галушкин & Поливанов 1996: 59).

Программа нового общества, безусловно, более близка к утилитаризму ЛЕФа¹⁴, чем к имажинизму, но, с точки зрения монтажа, не менее важна для восприятия мариегофской прозы. Данный факт, с одной стороны, указывает на основания поверхностной структуры *Циников*, и, с другой, позволяет предположить, что документы, включенные в роман, являются подлинными. В *Циниках* Мариенгоф воспроизводит эту идеологию, смешивая при этом подобранные документы (в “хронологическом беспорядке”, по словам рассказчика) с фикциональным повествованием и имажинистской образностью. Таким образом, он строит конфликтный гетерогенный монтаж, который, как нам кажется, мог быть одним из причин того, что публикация романа в СССР была запрещена. В постановлении Московского Отдела Всероссийского Союза Советских Писателей ссылались именно на это:

Тенденциозный подбор фактов в романе “Циники”, искажающий эпоху военного коммунизма и первого периода нэпа, делает книгу объективно вредной и неприемлемой для советской общественности. (Цит. по ПИ 1997: 194).

¹⁴ Особенно близки идеи Осипа Брика о том, что “поэты не выдумывают тем, они берут их из окружающей среды” (Брик 1923: 214) и доминирующее в статье “Ближе к факту” (Брик 1927) требование сосредоточиться на реалиях советского быта.

Тем не менее, документы, включенные Мариенгофом в роман, не воспринимаются как подлинные, т.к. их интекстовость — необходимое смысловое соотношение с “имажинистским” и дневниковым текстами романа, — безусловно влияет на их декодирование. В смысловом соотношении с основным пространством текста документальные интексты теряют свое документальное значение и становятся материалом художественного текста. Основное пространство текста оказывается более реальным, чем инородные включения, которые по своей природе — вещи исторического мира. В конечном счете, документы оказываются имитациями подлинных документов¹⁵. Приведем пример сопоставления фрагментов, первый из которых, будучи документом, взят в кавычки и сопровождается указанием на источник. Сам по себе этот интекст акцентирует внимание читателя на документах как знаках “реальности” внутри романа:

[1922: 47]

“Людоедство и трупоедство принимает массовые размеры” (“Правда”).

[1922: 48]

Вчера в два часа ночи у себя на квартире арестован Докучаев. (Мариенгоф 1928: 134).

Первый фрагмент следует трактовать как титровый кадр к новости об аресте нэпмана Докучаева, но, тем не менее, он полифункционален и сцепляется с рассыпанным по всему роману рассказом о каннибализме.

Любопытное обоснование сопоставления фрагментов (чаще всего конфликтного) имажинистского текста и декларирующих свою аутентичность документов находим в статье “Почти декларация” (1923), автором которой, предположительно, является сам Мариенгоф¹⁶. В первых строках текста проводится четкое разделение:

Два полюса: поэзия, газета.

Первый: культура слова, то есть образность, чистота языка, гармония, идея.

Второй: варварская речь, то есть терминология, безобразность, аритмичность и вместо идей: ходячие истины. (ГПП2 1923: 1).

¹⁵ Ср. Лотман 1992, т. I: 180.

¹⁶ См. ПИ 1997: 467.

В контексте мариенгофского конфликтно-монтажного мышления данная оппозиционная пара представляется закономерным воплощением пары “чистого” и “нечистого”. Учитывая вышеупомянутые контекстуальные связи, монтажная композиция *Циников*, как нам кажется, становится более понятной. В коктейль-романе мы можем обнаружить смешение культурных языков, жанровых границ, литературных школ и, в конечном счете, вымысла и факта. Гиперболизированная визуальность, сочленение “чистого” и “нечистого”, поверхностная структура каталога образов и смысловое соотношение фрагментов (требование активного участия от читателя) являются последствиями мариенгофского имагинизма (по своей природе изначально анти-футуристского) и скрытого в нем монтажного мышления¹⁷.

Теперь обратимся к имагинистской тематике Мариенгофа, которая также существенна для текста *Циников*. В имагинистском творчестве Мариенгофа вырисовывается определенный тематический треугольник или цепочка трех образных концептов: любовь — библейские сюжеты — революция. В одном из мариенгофских стихотворений, опубликованном в пензенском прото-имагинистском альманахе *Исход* (1918), можно обнаружить все существенные элементы этого треугольника:

Из сердца в ладонях
 Несу любовь.
 Ее возьми —
 Как голову Иоканаана,
 Как голову Олоферна...
 Она мне, как революции — новь,
 Как нож гильотины —
 Марату,
 [...]
 Как, за Распятого,
 Иуде — осины

¹⁷ Учитывая приведенные выше основные типы русского монтажа в кинотеории, здесь можно отметить признаки всех линий: эйзенштейновской манипулятивно-конфликтной (столкновение образов, необходимость реконструирования новых смыслов читателем), кулешовский нарративный (сцепление фрагментов в целые “рассказы”) и вертовский риторический (соотношение вымысла и факта, проблематика документации). Хотя в данном случае мы не рассматриваем собственно кинематографические основы композиции романа, не следует забывать о взаимосвязи кино и литературы в деятельности Мариенгофа. С 1924-го по 1925 год он работал заведующим сценарного отдела Пролеткино, а в конце 1920-х гг. был соавтором многих сценариев.

Сук...
Всего кладу себя на огонь
Уст твоих,
На лилии рук.

(Мариенгоф 1996: 5).

Представляется интересной функция многочисленных повторяющихся библейских цитат в этой цепи, так как именно они усложняют интерпретацию сопоставления любви и революции в текстах Мариенгофа. Библейские мотивы оказываются границей между этими двумя полюсами — своего рода переходами от любви к революции, одновременно соединяющими и отталкивающими. Естественным образом напрашивающееся сопоставление высокой, библейской любви с низким общественным положением оказывается амбивалентным, так как библейские мотивы в текстах Мариенгофа используются не только как источник “чистой любви”, но и как источник свойственного раннему Мариенгофу революционного “богохульства”:

Кровью плюем заorno
Богу в юродивый взор.
Вот на красном черным:
 Массовый террор. [...]

По тысяче голов сразу
С плахи к пречистой тайне.
Боженька, сам ты за пазухой
Выносил Каина, [...]
Молимся Тебе матерщиной
За рабьих годов позор

(Мариенгоф 1996: 18).

К тому же, библейские мотивы тесно связаны с многофункциональным мотивом декапитуляции, “рассказом” об оторванных головах. Данный мотив зачастую оказывается образом революции 1917 года, сопоставление которой с французской революцией также является исходным пунктом в *Циниках*:

Ольга разводит плечи:
— Странная какая-то революция.
И говорит с грустью:
— Я думала, они первым долгом поставят гильотину на Лобном месте. (Мариенгоф 1928: 9).

Когда Владимир пытается романтически описать свою жену, неожиданно возникает сюжет о голове Иоанна Крестителя (ср. Евангелие от Матфея 14: 3–4):

Ее голова отрезана двухспальным шелковым одеялом. На хрустом снеге полотняной наволочки растекающиеся волосы производят впечатление крови. Голова Иоканаана на серебряном блюде была менее величественна [...] Я горд и счастлив, как Иродиада. Эта голова поднесена мне. Я благодарю судьбу, станцевавшую для меня танец семи покрывал. (Мариенгоф 1928: 22–23).

Библейский мотив оторванных голов отражает амбивалентное отношение Мариенгофа к революции и, с другой стороны, двоякую соотношенность любви и революции в его творчестве. Любовь сливается с революцией, индивидуальное превращается в коллективное, но в то же время они сталкиваются. Так происходит в поэме *Магдалина* (1920), в которой безумная любовь сопоставляется с циничной любовью героев *Циников*. В обоих случаях кровавая революция оказывается, с одной стороны, оппозицией любви, а, с другой стороны, ее необходимым контекстом, своего рода источником:

Магдалина, мы в городе — кровь как из водопровода;
Совесь усовершенствованнее канализации.
Нам ли, нам ли с тобой спастись,
Когда корчится похоть, как женщина в родах. (Мариенгоф 1996: 37–38).

При этом в монтажном романе выводы остаются задачей для читателя, который должен собрать фрагменты в смысловое целое:

[1918: 18]

Сегодня ночью я плакал от любви.

[1918: 19]

В Вологде собрание коммунистов вынесло постановление о том, что “необходимо уничтожить класс буржуазии”. Пролетариат должен обезвредить мир от паразитов, и чем скорее, тем лучше.

[1918: 20]

— Ольга, я прошу вашей руки.

— Это очень кстати, Владимир. Нынче утром я узнала, что в нашем доме не будет всю зиму действовать центральное отопление. Если бы не ваше предложение, я бы непременно в декабре месяце превратилась в ледяную сосульку. Вы представляете себе, спать одной в кроватище, на которой можно играть в хоккей?

— Итак...

— Я согласна. (Мариенгоф 1928: 21–22).

Что касается интерпретации романа, одна из его немногих возможных трактовок непосредственно связана с судьбой имажинистской школы: прототипы главных героев можно найти среди имажинистов, тогда как самоубийство героини Ольги отсылает к реальным событиям. Это подтверждает тезис, согласно которому *Циники* были мариенгофским эпилогом истории имажинизма, противоречивым и проникнутым автопародией, как в следующем эпизоде, кажущемся случайным, но с точки зрения монтажа очень показательным:

[1919: 16]

Ольга почему-то не осталась ночевать у Сергея. Она вернулась домой в два часа.

Я слышал, с оборвавшимся дыханием, как повернулся ее ключ в замке, как бесшумно, на цыпочках, миновала она коридор, подняла с пола мою шубу и прошла в комнаты.

Найдя кровать пустой, она вернулась к Марфушиному чуланчику и, постучав в перегородку, сказала:

— Пожалуйста, Владимир, не засыпайте сразу после того, как “осушите до дна кубок наслаждения”! Я принесла целую кучу новых стихов имажинистов. Вместе повеселимся.

[1919: 17]

Тифозники валяются в больничных коридорах, ожидая очереди на койки. Вши именуются врагами революции. (Мариенгоф 1928: 66).

Итак, роман *Циники* парадоксален в своем противоречивом имажинизме и пост-имажинизме. Он представляет собой не только исключительный в русской литературе пример имажинистской прозы (на уровнях структуры и образов), но и важный художественный эпилог в истории имажинистской школы. Имажинистская проза оказалась кратким отрезком творческого пути Мариенгофа. Вместе с тем в данном романе возник еще один предмет его рефлексии — проблема вымысла и факта. Факт начал играть первостепенную роль, и как показывает замысел создания нового литературного общества “Литература и быт”, художественная проза осталась в стороне¹⁸. Мариенгоф перешел к мемуарам.

¹⁸ Не следует, однако, забывать о романах *Бритый человек* (1930) и *Екатерина* (конец 1950-х). Первый полон автобиографических мотивов и прототипов, второй не что иное как исторический роман, типичная для Мариенгофа фрагментарная проза.

Литература

- Брик, О. М. 1923. Т.н. “формальный метод”. *Леф* 1: 213–215.
 — 1927. Ближе к факту. *Новый Леф* 2: 32–34.
- Булгакова, О. Л. 1988. Монтаж – в театральной лаборатории 20-х годов. *МЛИТК*: 99–117.
- Галушкин, А. Ю. & Поливанов, К. М. 1996. Имажинисты: лицом к лицу с НКВД. *Литературное обозрение* 5–6: 55–64.
- Гинзбург, Лидия 1929. Вяземский. В кн.: Вяземский, П. *Старая записная книжка*. Ленинград: Изд. писателей.
- ГПП2. 1923. Гостиница для путешествующих в прекрасном 2.
- Иванов, В. В. 1988. Монтаж как принцип построения в культуре первой половины XX в. *МЛИТК*: 119–148.
- Кабалоти, С. М. 1998. *Поэтика прозы Гайто Газданова 20–30-х годов*. Санкт-Петербург: Петербургский писатель.
- Лотман, Ю. М. 1973. *Семиотика кино и проблемы киноэстетики*. Таллинн: Ээсти раамат.
 — 1992. *Избранные статьи в трех томах*. Таллинн: Александра.
- Мариенгоф, А. Б. 1928. *Циники*. Берлин: Петрополис.
 — 1996. *Неизвестный Мариенгоф. Избранные стихи и поэмы 1916–1962 годов*. Санкт-Петербург: Лань.
 — 1997. Буян-Остров. Имажинизм. В кн. *ПИ*: 32–42.
 — 1998. *Бессмертная трилогия*. Москва: Вагриус.
- Марков, В. Ф. 1983. В защиту разноударной рифмы (информативный обзор). В кн.: Eekman T., Worth D. S. (eds.), *Russian Poetics. Proceedings of the International Colloquium at UCLA, Sept. 22–26, 1975*. Los Angeles, 235–261.
- МЛИТК 1988. Раушенбах Б. В. (ред.), *Монтаж. Литература. Искусство. Театр. Кино*. Москва: Наука.
- МОЙ ВЕК 1990. *Мой век, мои друзья и подруги. Воспоминания Мариенгофа, Шершеневича, Грузинова*. Сост. С. В. Шумихин. Москва: Московский рабочий.
- ПИ 1997. *Поэты-имажинисты*. Сост. Э. М. Шнейдерман. Санкт-Петербург: Петербургский писатель.
- Соколов, В. С. 1988. К проблеме монтажа в концепции Андре Базена. *МЛИТК*, 32–46.
- Терехина, Вера 1998. Бедкер по русскому экспрессионизму. *Арион* 1: 51–64.
- Тименчик, Р. Д. 1989. К вопросу о монтажных процессах в поэтическом тексте. *Труды по знаковым системам XXIII*. Ученые записки Гарьтского государственного университета 855: 145–150.

- Хуттунен, Томи 1998. Циники А. Б. Мариенгофа — монтаж вымысла и факта. *Проблема границы в культуре*. Studia Russica Helsingiensia et Tartuensia VI. Tartu: 223–236.
- Шершеневич, В. Г. 1916. *Зеленая улица. Статьи и заметки об искусстве*. Москва: Изд. Плеяды.
- 1920. *2 x 2 = 5. Листы имажиниста*. Москва: Имажинисты.
- 1997. *Листы имажиниста: стихотворения, поэмы, теоретические работы*. Ярославль: Верхне-Волжское кн. изд.
- Эйзенштейн, С. М. 1964. *Избранные произведения*. Т. 2. Москва: Искусство.
- Althaus, Bettina 1999. *Poetik und Poesie des russischen Imaginismus. Anatolij B. Mariengof*. Hamburg: Verlag Dr. Kovac.
- Van Baak, Joost 1997. О прозе поэта. Анатолий Мариенгоф и поэтика занозы. *Russian Literature*, XLII: 261–270.
- Kosanovic, Bogdan 1987. Образ и русский имажинизм. *Russian Literature*, XXI-I.
- Lawton, Anna 1979. Šeršenevic, Marinetti, and the “Chain of Images”: From Futurism to Imaginism. *SEEJ* 23/2: 203–215.
- 1993. The Futurist Roots of Russian Avant-garde Cinema. In: Vroon, R.; Malmstad, J. E. (eds.), *Readings in Russian Modernism. To Honor Vladimir Fedorovich Markov*. Moscow: Nauka, 188–205.
- Markov, Vladimir 1980. *Russian Imagism 1919–1924*. Bausteine zur Geschichte der Literatur bei den Slawen 15(1). Giessen: Wilhelm Schmitz Verlag.
- Michelson, Annette 1992. The Wings of Hypothesis: On Montage and the Theory of the Interval. In: Teitelbaum, M. (ed.), *Montage and Modern Life 1919–1942*. Cambridge etc.: MIT Press, 61–81.
- Nilsson, Nils-Åke 1970. *The Russian Imaginists*. Stockholm Slavic Studies 5. Stockholm: Almqvist & Wiksell.
- Ponomareff, C.V. 1968. The Image seekers: An Analysis of Imaginist Poetic Theory, 1919–1924. *SEEJ* 12(3): 275–297.
- Schaumann, Gerhard 1985. Монтаж. *Russian Literature* XVIII: 143–150.
- Schreurs, Marc 1989. *Procedures of Montage in Isaak Babel's Red Cavalry*. Amsterdam: Rodopi.
- Tupitsyn, Margarita 1992. From the Politics of Montage to the Montage of Politics: Soviet Practice 1919 Through 1937. In: *Montage and Modern Life 1919–1942*: 83–127.

“Sõnakujunditelt” “peatükikaadriteni”: Anatoli Mariengofi imažinistlik montaaž

Artiklis vaadeldakse Anatoli Mariengofi (1897–1962) poeetilise tehnika kolme põhilist imažinistlikku printsiipi, mis on leidnud kasutamist tema esimeses romaanis “Küünikud” (1928). Need printsiibid hõlmavad esiteks “kujundite kataloogi” — nimisõnadest koosnevat poeesia liiki, mis on pärit Vadim Šeršenevitšilt ja mida Mariengof kasutas oma suurtes imažinistlikes luuletustes. Teine domineeriv imažinistlik printsiip, mis sisaldub nii Mariengofi teoreetilistes töödes kui ka poeetilistes tekstides, on analoogne vene futurismi jaoks tüüpilise šokeerivate kujundite loomisega. Mariengofil väljendub see “puhta” ja “ebapuhta” koosluses, keeletehnikate vahelistes ja kujundisisestest konfliktides, mis iseloomustavad nii Mariengofi proosat kui ka poeesiat. Kolmas, võibolla Mariengofile kõige iseloomulikum imažinistlik printsiip, mis on oluline “Küünikute” puhul, on *nihke poetika* (*poetika sdviga*), st teksti fragmentaarne struktuur, mis on Mariengofil seotud erirõhuliste riimide kasutamisega. Kõiki neid printsiipe võib vaadelda kui Mariengofi poolt proosatekstides kasutatava montaažitehnika põhielemente.

Жанровая дефиниция произведений Достоевского

Ирина Аврамец

Allika 1–3, Tartu, Estonia

e-mail: avramets@ut.ee

Abstract. **On the definition of genre of Dostoevsky's works.** The article mostly addresses Dostoevsky's own definitions of genres of his works, either explicated in the texts (subtitles, prefaces) or contained in the writer's letters; or rather the relationship between the scholarly strategies of defining genres and the writer's own view, as evidenced by subtitles which, in some sense, are part of the text (in nearly, but not precisely, the same way as the titles themselves are). The writer's own definitions, then, can be regarded as possible objects of the scholarly interpretation. Agreement, or lack thereof, between the author's and the scholars' definitions may be due both to similarity vs dissimilarity between the definition standards inherent in the respective epochs and to specific interpretation aspects. In the latter case, agreement is more common in studies focusing on vastly different problems unrelated to genre, whereas disagreement is more frequent in studies concerned with the genres of Dostoevsky's works. One of the reasons why his own definitions must be critically revisited is that certain titles of his works can be basically viewed as subtitles or genre definitions insofar as they in some way define the variety of the text regardless of the underlying criterion: narrative, "discourse", type of source, genre, or genre variety. Indeed, both these subtitles and, sometimes, the writer's own genre definitions turn out to be pretense, an imitation of "standard" subtitles or genre definitions, respectively. Titles themselves sometimes look like subtitles, thus "exposing the device" and demonstrating this mimicry not merely by violating semantic and syntactic relations in the case of subtitles (sign/name/title/ subtitle and virtual reference/"reality" of text — and relationships such as those between title and subtitle; title and the principal text; and subtitle and principal text), but also by the fact that their position is "marked". Dostoevsky not just failed to follow his own "final genre definitions" within the text, as reflected in the subtitles, and not just changed them repeatedly in his letters,

but in the official documents, too, he sometimes defined genres in a way which did not agree with either the subtitles or his own definitions given in his letters.

Dostoevsky frequently changed the genre definitions not merely during his work on a text, which would be only natural, and not merely many years after it had been completed, published, revised, and republished (which might be ascribed to memory errors), but also shortly after the completed manuscript had been shipped to the publishers or after the text had been published or republished. While the logic underlying these changes must be studied and interpreted, it is evident that the scholars are often unable to accept the author's own "final genre definitions" both because these are often unavailable in subtitles, and because of the "Proteic" nature of their use by the writer in various contexts.

В предлагаемой статье речь пойдет преимущественно об авторских жанровых дефинициях, либо эксплицированных в тексте (подзаголовков, предисловие), либо рассеянных в письмах писателя, точнее, — о соотношении исследовательской стратегии жанровой дефиниции с авторской. Очевидно, что исследователь может как солидаризироваться в этом вопросе с автором, так и "противоречить" ему, поскольку авторские жанровые наименования зависят от самых разнородных причин, среди которых стремление к максимально адекватной характеристике типа произведения, как бы спрессованной в однозначном слове-термине, явно не всегда стоит на первом месте.

Поскольку нас интересует главным образом поэтика новеллы Достоевского, начнем с рассмотрения вопроса о правомерности употребления в данном случае самого термина "новелла". Тот факт, что Достоевский, снабжавший почти все свои произведения подзаголовками, определявшими их жанровую принадлежность (или же "мимикрировавшими" под жанровые дефиниции, о чем речь пойдет дальше), ни разу при этом не употребил слово "новелла", на наш взгляд, не является препятствием для применения этого термина по отношению к отдельным произведениям малой прозы писателя¹.

¹ Как полагает автор монографии, посвященной системе жанров Достоевского, "выделение такого жанра у Достоевского не то что спорно — просто неверно <...> Достоевский не "ощущал" новеллу как жанр и новелл не писал" (Захаров 1985: 7). Поскольку в этой работе основанием для «выделения типологических рядов взяты жанровые определения самого Достоевского» (там же), что, как мы попытаемся показать, просто невозможно осуществить по целому ряду причин,

Во-первых, авторская жанровая дефиниция, отраженная в подзаголовке, является в определенном смысле частью текста (так же — хотя и в ином ключе — как и само заглавие), тем самым становясь возможным объектом исследовательской рефлексии. Примеры несовпадения (или совпадения) авторского жанрового наименования с исследовательским могут быть обусловлены как различием (или совпадением) между нормами жанровых дефиниций, принятыми в эпоху создания текста, и нормами, имеющимися в момент его исследовательской интерпретации, — так и самим аспектом рассмотрения текста. В последнем случае, как правило, совпадения встречаются в работах, посвященных самым различным, но не связанным с проблемой жанра, вопросам, тогда как несовпадения чаще встречаются в исследованиях, затрагивающих проблему жанровой природы текста. Что же касается жанровых определений применительно к произведениям так называемой малой прозы, то сама нечеткость границ между ними (отсутствие явных различительных признаков у повести, рассказа и новеллы) приводят к тому, что зачастую становится неизбежным “исследовательский произвол”.

Во-вторых, многие жанровые определения Достоевского дают основание предположить их отнюдь не терминологическую, а скорее метафорическую природу. Так, вряд ли возможно иначе квалифицировать такие подзаголовки Достоевского, как “петербургская поэма” (“*Двойник*”), “сентиментальный роман” (“*Белые ночи*”), и “фантастический рассказ” (“*Кроткая*”).

Определение повести “*Двойник*” “петербургской поэмой” под-ключает это произведение к гоголевской традиции, ориентируя

то ограничимся указанием на то, что Достоевский и новеллы Э. По называл рассказами (Достоевский 1979: 19; 88–89). Неупотребление (или употребление в ином значении) писателем или поэтом того или иного термина не свидетельствует о том, что и исследователи должны следовать его примеру, иначе им придется отказаться и от изучения жанров Достоевского, поскольку, по словам того же автора, “в языке Достоевского нет слова “жанр” в современном значении. “Жанр” был для него искусствоведческим термином” (там же: 23). Разумеется, автор монографии и не отказывается: “Отсутствие слова “жанр” отнюдь не значит, что в его художественном мышлении нет этой категории. Жанр был для Достоевского не абстрактным, а конкретным понятием: романом, повестью, поэмой, рассказом” (там же). Не берясь судить о том, что “ощущал” или воспринимал в качестве конкретного понятия Достоевский, мы употребляем термин “новелла” по отношению к определенным произведениям писателя на основании того, что анализ их композиционно-сюжетной структуры позволяет именно таким образом определить их жанр (см.: Аврамец 1987, 1988, 1990, 1990а, 1995).

читателя на восприятие “поэмы” “*Двойник*” сквозь призму “поэмы” “*Мертвые души*”. Правда, этот подзаголовок появляется лишь во второй редакции “*Двойника*”, в издании 1866 года, тогда как в первом издании (в журнальной редакции 1846 года) фигурировал подзаголовок “Приключения господина Голядкина”, но факт соотносительности “*Двойника*” в сознании Достоевского и его современников именно с “поэмой” Гоголя еще в 1846 году косвенно подтверждается в письме писателя к брату от 1 февраля, в день выхода номера “Отечественных записок”, где был опубликован “*Двойник*”: “Наши говорят, что после “*Мертвых душ*” на Руси не было ничего подобного <...> Тебе он понравится даже лучше “*Мертвых душ*”, я это знаю” (Достоевский 1985: 28(1); 118).

Уникальное для Достоевского определение “сентиментальный роман” дано им только “*Белым ночам*”, и уже сама нерегулярность подзаголовка (почему, в таком случае, не названы “сентиментальными романами” “*Бедные люди*”, “*Хозяйка*”, “*Униженные и оскорбленные*”?), а также сравнительно небольшой объем текста (40 стр.), который заставляет большинство критиков и исследователей, игнорируя авторскую “жанровую дефиницию”, называть произведение “повестью”, — позволяют предположить некоторую игру слов: название “сентиментальный роман” относится не столько к тексту как разновидности литературного жанра, сколько к описываемой в этом тексте ситуации. Иными словами, мы имеем дело с определением не столько типа знака (если рассматривать текст как знак), сколько типа денотата (или, если угодно, типа “виртуального референта”).

Что же касается наименования “фантастический рассказ” по отношению к “*Кроткой*”, то определение “фантастический” (объективно уместное по отношению к “*Сну смешного человека*” или, скажем, к такому произведению, как “*Бобок*”, который фантастическим как раз не назван, не говоря уж о “*Двойнике*” или “*Крокодиле*”!), — учитывая невозможность для читателя воспринимать описываемые в этом произведении события как фантастические в привычном значении этого слова, — можно понять и счесть оправданным, лишь благодаря предисловию к “*Кроткой*” (“От автора”), о котором мы подробнее будем говорить ниже, а также в контексте многочисленных высказываний Достоевского о “фантастическом реализме”². Отсутствие в

² Подробнее об этом см.: Соркина 1969, Газер <Белобровцева> 1972, Захаров 1974.

данном случае таких необходимых для термина качеств, как недвусмысленность и регулярность, как бы бросает тень и на слово “рассказ”, и не случайно в исследовательской литературе “Кроткая” именуется, как правило, повестью.

Необходимость критического отношения к авторским жанровым наименованиям подтверждается и тем обстоятельством, что некоторые заглавия произведений Достоевского выполняют, в сущности, функцию подзаголовка или жанровой дефиниции, поскольку они как бы определяют разновидность текста (неважно, по какому принципу: тип наррации, “дискурса”, тип источника текста, жанр, жанровый подвид), при этом — именно “как бы”, так как и подзаголовки писателя, а в некоторых случаях и жанровые определения, на наш взгляд, лишь “мимикрируют”, делают вид, что они — жанровые определения или “нормальные” подзаголовки, причем, зачастую делают это откровенно и намеренно плохо, т.е. непохоже. Заглавия же “подзаголовочного” типа еще более “обнажают прием”, демонстрируя эту мимикрию не только нарушением семантических и синтаксических связей (соотношение знака/имени/названия/заглавия/подзаголовок и денотата/виртуального референта/”реальности” текста — и соотношение между заглавием и подзаголовком, заглавием и основным текстом, подзаголовком и основным текстом), как в случае подзаголовков, но и самим фактом нахождения на месте названия:

Таблица 1

Заглавия	Подзаголовки/жанровые определения
“Роман в девяти письмах”	~ “Роман в четырех частях с эпилогом” (“Униженные и оскорбленные”, а также почти все романы “пятикнижия”)
“Скверный анекдот”	~ “Фантастический рассказ”
	~ (“Кроткая”, “Сон смешного человека”)
	~ “Сентиментальный роман”
	(“Белые ночи”)
	~ “Необыкновенное событие, или Пассаж в Пассаже” (“Крокодил”)
	~ “Происшествие необыкновенное” (“Чужая жена и муж под кроватью”)
	~ <или же, согласно первому изданию:
	“Уличная сцена” (“Чужая жена”),
	“Происшествие необыкновенное”
	(“Ревнивый муж”)>

“Записки из Мертвого
дома”,

“Записки из подполья”

“Зимние заметки о летних
впечатлениях”

- ~ “Из записок неизвестного”
 (“Честный вор” <в журнальной редакции
1848 г. заглавие было иным, более
“подзаголовочным”: “Рассказы бывалого
человека. (Из записок неизвестного).
I. Отставной. II. Честный вор”>), “Елка и
свадьба”,
“Село Степанчиково и его обитатели”),
- ~ “Из записок молодого человека”
 (“Игрок”),
- ~ “Записки одного лица” (“Бобок”).

Таким образом, заглавия и подзаголовки как бы меняются своими местами. Особенно наглядно это демонстрирует история издания “Крокодила”: в журнальном издании текст имеет заглавие “Необыкновенное событие, или Пассаж в Пассаже”, при перепечатке же его в Собрании сочинений (в том же году, в 1865) Достоевский дает новое название, “Крокодил”, перенеся прежнее название в подзаголовок (Кийко 1973: 5; 393).

Следует указать, что произведения Достоевского можно разделить на несколько типов по наличию/отсутствию жанрового (условно говоря) определения — “рассказ”, “повесть”, “поэма” или “роман”, — по наличию/отсутствию еще более условных определений источников текста — “записки одного лица”, “из записок неизвестного”, “из воспоминаний мечтателя”, “из записок молодого человека”, “из мордасовских летописей”, “из неизвестных мемуаров”. Очевидно, что при таком подходе можно выделить 4 основных типа текстов:

1. тексты с авторской жанровой дефиницией и с определением источника;
 2. тексты с авторской жанровой дефиницией, но без определения источника;
 3. тексты без авторской жанровой дефиниции, но с определением источника;
 4. тексты без того и другого.
- К первому типу относятся такие произведения, как “Белые ночи. Сентиментальный роман. (Из воспоминаний мечтателя.)”, “Игрок. Роман. (Из записок молодого человека.)” (всего 2);

- ко второму — “Бедные люди. Роман”, “Двойник. Петербургская поэма”, “Господин Прохарчин. Рассказ”, “Хозяйка. Повесть”, “Слабое сердце. Повесть”, “Униженные и оскорбленные. Роман в четырех частях с эпилогом”, “Скверный анекдот. Рассказ”, “Преступление и наказание. Роман”, “Идиот. Роман в четырех частях”, “Вечный муж. Рассказ”, “Бесы. Роман в трех частях”, “Подросток. Роман”, “Кроткая. Фантастический рассказ”, “Сон смешного человека. Фантастический рассказ” и “Братья Карамазовы. Роман в четырех частях с эпилогом” (всего 15);
- к третьему — “Честный вор. (Из записок неизвестного.)”, “Елка и свадьба. (Из записок неизвестного.)”, “Маленький герой. (Из неизвестных мемуаров.)” (разумеется, если учитывать первоначальный вариант, то это произведение, названное Достоевским “Детская сказка”, следует отнести к четвертому типу, пополнив одновременно приведенный в первой таблице список заглавий “подзаголовочного” типа), “Дядюшкин сон. (Из мордасовских летописей.)”, “Село Степанчиково. Из записок неизвестного” и “Бобок. Записки одного лица” (всего 6);
- к четвертому — “Роман в девяти письмах”, “Петербургская летопись” (очевидно, что нехудожественные жанры следует рассматривать особо, в том числе и в вопросах, связанных с поэтикой их заглавий и подзаголовков, но для нас в данном случае важно продемонстрировать перекличку заглавий между собой, а также перекличку заглавий и подзаголовков), “Ползунков”, “Неточка Незванова” (в журнальном издании 1849 имелся года подзаголовок “История одной женищины”), “Записки из Мертвого дома”, “Зимние заметки о летних впечатлениях”, “Записки из подполья” (всего 7).

Как видно, за рамками этой классификации остались два текста, снабженные подзаголовками, представляющими собой краткую характеристику описываемых в тексте событий: “Чужая жена и муж под кроватью. (Происшествие необыкновенное.)” (или, как уже говорилось выше, “Чужая жена. (Уличная сцена.)” и “Ревнивый муж. (Происшествие необыкновенное.)”) и “Крокодил. Необыкновенное событие, или Пассаж в Пассаже”. Что касается последнего, то он вообще отличается от всех остальных текстов, поскольку содержит в себе (помимо и без того двойного подзаголовка!) еще и “подподзаголовок”: “Справедливая повесть о том, как один господин, известных лет и известной наружности,

пассажным крокодилом был проглочен живьем, и что из этого вышло”. Собственно говоря, наличие здесь слова “повесть” дает основание причислить весь текст к первому типу, если взять за основу журнальный вариант, где был указан и “источник” текста: “Необыкновенное событие, или Пассаж в Пассаже, справедливая повесть <...> Семеном Стрижовым доставлено”. Если же рассматривать переработанный вариант, включенный Достоевским в Собрание сочинений 1865 года и ставший окончательным для последующих переизданий, то его можно, хотя и с оговорками, отнести ко второму типу. Что же касается текста “*Чужая жена и муж под кроватью*”, то, как отмечает комментатор, “оба эти рассказа <т.е. “*Чужая жена*” и “*Ревнивый муж*”, — И. А.>, по-видимому, должны были входить в цикл “Из записок неизвестного”, о чем свидетельствуют первоначальные варианты рассказов, связывающие их с “*Елкой и свадьбой*” <...>, а также единый для этих произведений образ повествователя” (Соломина 1972: 479). Таким образом, похоже, что и этот текст, если и не вписывается в нашу классификацию прямо, то тяготеет к ее третьему типу.

Итак, вне зависимости от того, учитываем ли мы первоначальный, журнальный вариант текста, или исходим из окончательной редакции, включаем или не включаем “нехудожественные” произведения (“*Петербургская летопись*”, “*Записки из Мертвого дома*” и “*Зимние заметки о летних впечатлениях*” — при том, что последний текст был, как будет указано ниже, назван Достоевским рассказом, а предпоследний — романом), — соотношение между максимальным и минимальным классами текстов сохраняется: наиболее продуктивен второй тип (15), наименее — первый (2); третий и четвертый располагаются посередине (6 и 7 соответственно), причем, если рассматривать только художественные произведения, то следует считать третий тип более “репрезентативным”, нежели четвертый (6 и 4).

Казалось бы, приведенная классификация свидетельствует лишь о том, что Достоевский, следуя распространенной в его время литературной традиции, предпочитает снабжать свои произведения жанровыми определениями, а также подзаголовками, указывающими заведомо мнимые источники текста³. Но,

³ Ср.: В. А. Соллогуб — “Тарангас. (Путевые впечатления)”, 1840; Говорилин <А. Я. Кульчицкий> — “Необыкновенный поединок. (Романтическая повесть)”, 1845; А. В. Дружинин — “Полинька Сакс. (Пролог в двух письмах)”, 1847;

как мы постарались показать выше, “хиастический” характер соотношения заглавий и подзаголовков, заглавий и авторских жанровых определений, подзаголовков и авторских жанровых определений — не позволяет остановиться на такой интерпретации картины. Включение же в состав заглавия квазижанровых определений вообще является универсальной традицией⁴ и поэтому невозможно без учета иных, более убедительных свидетельств возводить эту особенность заглавий Достоевского к каким бы то ни было литературным примерам. Так, “*Роман в девяти письмах*” назван таким образом явно с учетом появившихся в 1830–1840-х годах рассказов, в заглавие которых входило слово “роман”⁵. Наличие в “романе” Достоевского определенных аллюзий на “*Евгения Онегина*” позволяет предположить пародийную соотнесенность заглавия “*Романа в девяти письмах*”,

Н. Станицкий <А. Я. Панаева> — “Семейство Тальниковых. (Записки, найденные в бумагах покойницы)”, 1848; Я. П. Бутков — “Невский проспект, или Путешествие Нестора Залетаева. (Повесть)”, 1848.

⁴ Ср., например: поэма Данте “*Божественная комедия*” (как известно, первым назвал “*Комедию*” Данте «божественной» Боккаччо, но первое издание текста с новым заглавием было осуществлено лишь в 1555 г.; как писал С. Кржижановский: “Вполне законная литературная традиция позволяет отвечать заглавие от автора к автору. Получаются ряды: “*Комедия*” (Данте) — “*Божественная комедия*” (дантеский) — “*Небожественная комедия*” (Словацкий) — “*Человеческая комедия*” (Бальзак) — “*Комедия человечества*” (Мадач) — и т.д.” (Кржижановский 1931: 26)), трагедия (или драма) Шекспира “*Зимняя сказка*”, рассказы В. Ф. Одоевского “*Пестрые сказки*” (полное название — “*Пестрые сказки с красным словом, собранные Иринею Модестовичем Гомозейкою*”), повесть П.И. Григорьева “*Петербургский анекдот с жильцом и домохозяином*”, “*Современная идилия*” Салтыкова-Щедрина, повесть Герцена “*Легенда*” и т.п. Что касается слова «записки» в составе заглавий (и тем более — подзаголовков!), то оно встречается у очень многих русских (и не только русских — ср. “*Посмертные записки Пиквикского клуба*” Диккенса) писателей первой половины — середины XIX века применительно к произведениям самых разных жанров — романам, повестям, рассказам, очеркам, мемуарам: “*Походные записки русского офицера*” И. И. Лажечникова, “*Записки гробовщика*” и “*Записки доктора*” В. Ф. Одоевского, “*Записки одного молодого человека*” Герцена, “*Записки замоскворецкого жителя*” Островского, “*Записки охотника*” Тургенева, “*Записки маркера*” Толстого и др.

⁵ Как указано в комментарии к этому произведению Достоевского, “некоторое влияние на форму рассказа и тон вошедшей в него переписки героев мог оказать опубликованный незадолго до его написания и приписываемый в настоящее время Некрасову “*Роман в письмах*” <...> Название рассказа, вероятно, было рассчитано автором на живые еще в 1840-е годы литературные ассоциации: оно вызывало у тогдашнего читателя воспоминание о “*Романе в семи письмах*” А. А. Бстужева-Марлинского <...> Впрочем, одновременно появился и “*Роман в двух письмах*” О. М. Сомова” (Фридендер 1972: 500).

объем которого всего 10 страниц, с подзаголовком “роман в стихах”⁶.

Как неоднократно отмечалось исследователями, Достоевский и некоторым другим произведениям давал жанровые определения, явно им несоответствующие по их объему. Так, М. А. Петровский писал:

“*Вечный муж*” назван автором “рассказом”. Определенно решить, какое точное терминологическое содержание вкладывал Достоевский в такой подзаголовок и вкладывал ли он вообще в него нечто подобное, — у нас нет достаточных материалов. Во всяком случае он не связывался им с размерами произведения. Более короткие вещи он мог называть “повестями” (как “*Хозяйку*”, “*Слабое сердце*”, “*Записки из подполья*” и “*Крокодил*”) или даже романами (“*Бедные люди*”, “*Роман в девяти письмах*”, “*Белые ночи*”); почти равный по размерам “*Вечному мужу*” “*Игрок*” назван Достоевским также романом. С этим последним подзаголовком, вероятно, связывалось у Достоевского “романическое” (любовное) содержание произведения (Петровский 1928: 116).

(Следует добавить, что Петровский дальше пишет, что он бы и роман “*Игрок*” назвал бы рассказом безо всякой натяжки.)

Для того, чтобы отчетливее и полнее представить соотношение между количественными параметрами произведений Достоевского с их жанровыми определениями (данными в подзаголовках), приведем таблицу всех художественных текстов, упоминаемых в нашей статье, с указанием года первой и/или окончательной редакции (точнее — той редакции, которая взята за основу в академическом собрании сочинений 1972–1990 гг., и по которой велся подсчет страниц) и количества страниц (количество страниц дано с округлением до единицы). В случае изменения авторского жанрового определения, новое дается в квадратных скобках, в случае же отсутствия жанрового определения в подзаголовках Достоевского (или же в случае несовпадения писательских жанровых дефиниций с исследовательскими), в ломаных скобках указывается жанровая дефиниция комментаторов академического издания.

⁶ Подробнее об этом см.: Аврамец 1988: 22–33.

Таблица 2

Заглавие	Жанровое определение	Год издания	Количество страниц
“Бедные люди”	“Роман”	1846, 1865	94
“Двойник” [“Петербургская поэма”]	<повесть>	1846, 1866	121
“Господин Прохарчин”	“Рассказ”	1846, 1865	23
“Роман в девяти письмах”	<рассказ>	1847	10
“Хозяйка”	“Повесть”	1847, 1865	57
“Ползунков”	<рассказ>	1848	11
“Слабое сердце”	“Повесть”	1848, 1865	33
“Чужая жена и муж под кроватью”	<рассказ>	1848, 1866	33
“Честный вор”	<рассказ>	1848, 1865	12
“Елка и свадьба”	<рассказ>	1848, 1866	6
“Белые ночи”			
“Сентиментальный роман”	<повесть>	1848, 1865	39
“Неточка Незванова”	<повесть>	1849, 1866	125
“Маленький герой”	<рассказ>	1857, 1866	28
“Дядюшкин сон”	<повесть>	1859, 1866	103
“Село Степанчиково и его обитатели”	<повесть>	1859, 1866	163
“Униженные и оскорбленные”	“Роман”	1861, 1879	273
“Скверный анекдот”	“Рассказ”	1862, 1865	40
“Записки из подполья”	[“Повесть”]	1864, 1865	80
“Крокодил”	“<...>повесть<...>”		
	<рассказ>	1865, 1865	27
“Игрок”	“Роман”	1866	110
“Преступление и наказание”	“Роман”	1866, 1877	416
“Идиот”	“Роман”	1868, 1874	501
“Вечный муж”	“Рассказ”	1870, 1871	107
	<повесть>		
“Бесы”	“Роман”	1871–1872, 1873	505
“Бобок”	<рассказ>	1873	13
“Подросток”	“Роман”	1875, 1876	449
“Кроткая”	“Фантастический рассказ”	1876	29/30
“Сон смешного человека”	“Фантастический рассказ”	1877	15
“Братья Карамазовы”	“Роман”	1879–1880, 1881	696

Как показывает эта таблица, амплитуда количественных параметров тех текстов, жанр которых был определен в подзаголовке самим Достоевским, наиболее выразительна у рассказов и романов: рассказы могли быть в 15, 23, 30, 40 и 107 страниц (если учитывать определения комментаторов и большинства других исследователей, то эта амплитуда расширяется, благодаря подключению еще семи текстов с количеством страниц: 6, 10, 11, 12, 13, 28 и 33). Романы — 10, 39, 94, 110, 273, 416, 449, 501, 505 и 696 (даже если не учитывать “*Роман в девяти письмах*”, цифры все же равно достаточно красноречивы). Что касается повести, то объем ее колеблется в весьма скромных границах (по сравнению с рассказом и романом): 27, 33, 57, 80. При подключении “вне-текстовых” жанровых определений повесть имеет тенденцию только к увеличению объема: 39, 103, 107, 121, 125, 163.

Причем, что характерно, исследовательское “переименование” явно тяготеет к количественным критериям проведения границы между рассказом, повестью и романом: так, рассказ называется “*Роман в девяти письмах*” (10 стр.) и “справедливая повесть” “*Крокодил*” (27), повестью — “роман” “*Белые ночи*” (39) и “рассказ” “*Вечный муж*” (107). Сторонник “качественного”, “содержательного”, а не “количественного”, “формального” подхода к определению жанра, В. Н. Захаров⁷ полагает, что Достоевский, как правило,

всегда знал, что собирался писать. Иногда замысел менялся, но весьма определенно и авторитетно Достоевский указывал (как правило, уже в заглавии произведения), что он написал, — роман, повесть или рассказ. Этой ясности и определенности жанровых дефиниций нет у исследователей его творчества: сплошь и рядом то, что Достоевский называл романом, называют повестью, а иногда и рассказом, повесть — рассказом или романом, рассказ — повестью и т.д. <...> Одно обстоятельство заставляет усомниться в том, что это принципиальные теоретические разногласия критиков с писателем: обычно жанровые переименования не то, что не доказаны, они просто не аргументируются исследователями (Захаров 1985: 5).

⁷ “Для Достоевского количественные критерии определения жанра не имели принципиального значения <...>” (Захаров 1985: 42). Ср. также: “Жанр у Достоевского — содержательная категория” (Захаров 1983: 19).

Сам Захаров декларирует свое “принципиальное согласие с писателем”⁸, что явно не всегда возможно, поскольку, во-первых, Достоевский отнюдь не все тексты снабжал подзаголовками, содержащими жанровые определения, а во-вторых, он, как правило, давал различные жанровые определения: в подзаголовках — и в своих письмах, упоминающих эти произведения, а также в “*Дневнике писателя*”, в подзаголовках — и в самих текстах. Так, “рассказ” “*Господин Прохарчин*” в письмах к брату называется Достоевским повестью⁹; рассказ “*Маленький герой*”, как упоминалось выше, был озаглавлен писателем “*Детская сказка*” и в письмах к тому же М. М. Достоевскому и к А. Н. Майкову был назван также повестью¹⁰. “*Дядюшкин сон*” назывался Достоевским то повестью, то романом¹¹ а в процессе создания “рассказа” “*Вечный муж*” Достоевский в письмах употреблял все три типа наименования — и роман, и повесть, и рассказ¹². Уже после отправки законченной рукописи издателю (5/17 декабря 1869 г.) Достоевский называет это произведение повестью¹³. Даже “*Бедные люди*” неоднократно упоминались им в качестве “повести”, — например, в “*Дневнике писателя*” за 1873 г. (Достоевский 1980: 21; 10), в “*Дневнике писателя за*

⁸ Разумеется, при такой “солидаризации” с писателем в определении жанра, Захаров неизбежно сталкивается с противоречиями: отнюдь не причисляет к романам “*Роман в девяти письмах*” (об этом произведении он предпочитает вовсе не писать), “*Двойник*” определяет как повесть, а не “поэму”. Кроме того, Захаров выделяет у Достоевского 8 рассказов (“*Господин Прохарчин*”, “*Ползунков*”, “*Чужая жена и муж под кроватью*”, “*Елка и свадьба*”, “*Честный вор*”, “*Маленький герой*”, “*Скверный анекдот*” и “*Вечный муж*”), т.е. в большинстве случаев (5 из 8) пользуется “внетекстовыми” определениями жанра, которые у Достоевского часто менялись. То же относится к повестям (выделено 6: “*Двойник*”, “*Хозяйка*”, “*Слабое сердце*”, “*Дядюшкин сон*”, “*Записки из подполья*” и “*Крокодил*”, т.е. 2 — по “внетекстовым” определениям) и романам (выделено 11, среди которых “бесподзаголовочными” являются “*Неточка Незванова*” и “*Село Степанчиково*”).

⁹ См. его письма М. М. Достоевскому от 26 апреля и 17 сентября 1846 г. (Достоевский 1985: 28(1); 123, 126).

¹⁰ См. его письма М. М. Достоевскому от 22 декабря 1849 г. и 1 марта 1858 г. (Достоевский 1985: 28(1); 162, 305), А. Н. Майкову от 11(23) декабря 1868 г. (Достоевский 1985: 28(2); 330).

¹¹ См. его письма М. М. Достоевскому от 18 января 1858 г. и Е. И. Якушкину от 12 декабря 1858 г. (Достоевский 1985: 28(1); 300, 318).

¹² См. его письмо А. Н. Майкову от 23 ноября (5 декабря) 1869 г. (Достоевский 1986: 29(1); 77–78).

¹³ См. его письма А. Н. Майкову от 7(19) декабря и С. А. Ивановой от 14(26) декабря 1869 г. (Достоевский 1986: 29(1); 79–81, 88).

1877 год” (Достоевский 1983: 25; 29), в “Кратких биографических сведениях” (Достоевский 1984: 27; 120). Можно сказать, что жанровые определения (а зачастую и заглавия) писателя совмещают в себе все три типа классификации заглавий Кржижановского: *Ante-scriptum*, *In-scriptum* и *Post-scriptum* (Кржижановский 1931: 21–23). Наконец, авторский подзаголовок “Кроткой” (“фантастический рассказ”) становится предметом и обоснования и опровержения в рамках самого текста (точнее — в предисловии “От автора”):

Я прошу извинения у моих читателей, что на сей раз вместо “Дневника” в обычной его форме даю лишь *повесть* <курсив везде наш — И. А.>. Но я действительно занят был этой *повестью* большую часть месяца. <...> Теперь о самом *рассказе*. Я озаглавил его “фантастическим”, тогда как считаю его сам в высшей степени реальным. Но фантастическое тут есть действительно, и именно в самой форме *рассказа*, что и нахожу нужным пояснить предварительно. Дело в том, что это и не *рассказ* и не *записки* (Достоевский 1982: 24; 5).

О том, как Достоевский сознательно обыгрывал многозначность жанровых обозначений, “активно употребляя жанровые дефиниции в нежанровых значениях”, Захаров пишет:

<...> таких примеров, когда в одном контексте оказываются роман и рассказ, рассказ и повесть, повесть и роман, можно привести много. Резюмируя значения этих слов, можно сказать: роман у Достоевского — не только жанр, но и любовные отношения, иногда художественный вымысел героев <...>; повесть и рассказ, помимо жанровых значений, — разные типы речевого сообщения. <...> Кроме того, есть у Достоевского произведения, жанровая природа которых недостаточно определена. В таком случае принципиальное значение приобретают окончательные жанровые дефиниции писателя. Включенные обычно в заглавие произведения, они являются элементом художественной структуры текста <...> (Захаров 1983: 19–20)¹⁴.

Эти замечания представляются справедливыми — за исключением утверждения о том, что у Достоевского всегда имелись “окончательные жанровые дефиниции” (как мы видим, у писателя их было много...). Указывая на полисемию жанровых определений Достоевского (что, на наш взгляд, лишает их термино-

¹⁴ Подробнее об этом см.: Захаров 1985: 23–51.

логического статуса) и на их вхождение в структуру текста (что, опять же, делает сомнительным их прямой перевод на уровень метаописания), Захаров, тем не менее, полагает правомерным для исследователя использование “жанровых дефиниций” самого Достоевского. Это неизбежно приводит к натяжкам, тем более, что автор, обосновывая закономерность выбора писателем тех или иных жанровых определений, в основу жанровой классификации кладет оценку “содержания”¹⁵.

Наконец, следует сказать о том, что Достоевский не только в пределах текста не придерживался собственных “окончательных жанровых дефиниций”, отраженных в подзаголовках, не только в письмах неоднократно их менял, но и в официальных документах мог давать жанровые определения, не совпадающие ни с “подзаголовочными”, ни с теми, которые он обычно употреблял в письмах. Так, в договоре с А. Н. Сниткиной от 19 марта 1874 г. Достоевский указывает:

<...> я, Достоевский, уступил Сниткиной за две тысячи рублей в полную и неотъемлемую собственность авторское право на издание моих сочинений: романов: “Бедные люди”, “Записки из Мертвого дома”, “Белые ночи”, “Униженные и оскорбленные”, “Преступление и наказание”, “Идиот”, “Бесы” и “Село Степанчиково”, — повестей: “Хозяйка”, “Слабое сердце”, “Записки из подполья”, “Рулетенбург”, “Неточка Незванова”, “Двойник” и “Дядюшкин сон”, — и рассказов: “Крокодил”, “Скверный анекдот”, “Зимние заметки о летних впечатлениях”, “Господин Прохарчин”, “Честный вор”, “Маленький герой” и “Елка и свадьба” (Достоевский 1986: 29(1); 278–279).

¹⁵ Так, вопрос о том, почему “Дядюшкин сон” является повестью, а “Село Степанчиково” — романом, Захаров решает однозначно: “Дядюшкин сон” — “история не о любви, а о незадачливом сватовстве», тогда как “Село Степанчиково” — “произведение, в котором трагикомическое “воцарение” вчерашнего шута и приживальщика <...> развертывается в поле конфликтного взаимодействия полюсов романного притяжения и отталкивания — социально и психологически осложненном чувстве любви полковника-вдовца и гувернантки его детей и суете вокруг сватовства к богатой, но безумной Татьяне Ивановне” (Захаров 1983: 18). Не говоря уж о правомерности приписывания Достоевскому “оценки содержания” в качестве “повода для жанрового определения”, отметим лишь, что такое противопоставление “повести и романа” явно не согласуется с самими произведениями: в “Дядюшкином сне” тоже имеется “социально и психологически осложненное чувство любви” Зины Москалевой к уездному учителю, а также “суета вокруг сватовства” к богатому, но в определенном смысле тоже безумному князю...

Как можно убедиться, авторское “жанровое переименование” — по отношению к “окончательным авторским дефинициям”, данным как в подзаголовках, так и в большинстве писем, — в данном случае происходит в соответствии именно с количественным параметром (“романы” — “*Записки из Мертвого дома*” — 236, “*Село Степанчиково*” — 163; “повести” — “*Рулетенбург*”, т.е. первоначальное название “*Игрока*”, — 110, “*Неточка Незванова*” — 125, “*Дядюшкин сон*” — 103; “рассказы” — “*Крокодил*” — 27, “*Зимние заметки о летних впечатлениях*” — 52).

Таким образом, Достоевский неоднократно менял жанровые определения своих произведений (в подзаголовках, предисловиях, в письмах, в “*Дневнике писателя*”, в разного рода документах), причем, не только в процессе их создания, что вполне объяснимо, не только по прошествии многих лет после написания и публикации или переиздания переработанных текстов, что можно было бы списать на ошибки памяти писателя, — но и “по свежим следам” — вскоре после отсылки готовой рукописи издателю или же после публикации/републикации текста. Разумеется, логику таких “переименований” можно и должно изучать и интерпретировать, но ясно одно: исследователи творчества Достоевского во многих случаях не в состоянии следовать авторским “окончательным жанровым дефинициям” как по причине их отсутствия в подзаголовках изрядного количества текстов, так и по причине “протеистического” характера их употребления писателем в разных контекстах.

Литература

- Аврамец, И.А. 1987. Комическая новелла Достоевского. *Учен. зап. Тарт. ун-та* 748. Тарту, 80–92.
- 1988. Эпистолярная новелла Достоевского. *Учен. зап. Тарт. ун-та* 822. Тарту, 22–33.
- 1990. Психологическая новелла Достоевского. *Учен. зап. Тарт. ун-та* 883. Тарту, 77–86.
- 1990а. Оксюморонный принцип сюжетного построения новеллы Достоевского “*Прохарчин*”. *Учен. зап. Тарт. ун-та* 897 (*Studia Russica Helsingiensia et Tartuensia* 2). Тарту, 53–71.

- 1995. Разрешение парадокса: новелла Достоевского “Честный вор”. “Свое” и “чужое” в литературе и культуре (Studia Russica Helsinkiensis et Tartuensia 4). Тарту, 184–190.
- Газер, И. <Белобровцева И.> 1972. Ф.М.Достоевский о фантастическом реализме. *Материалы XXVII научной студенческой конференции. Литературоведение. Лингвистика.* Тарту.
- Достоевский, Ф. М. 1972–1990. *Достоевский Ф. М. Полное собрание сочинений в тридцати томах.* Ленинград: Наука.
- Захаров, В. Н. 1974. Концепция фантастического в эстетике Ф. М. Достоевского. *Художественный образ и историческое сознание.* Петрозаводск.
- 1983. Типология жанров Достоевского. *Жанр и композиция литературного произведения: Межвузовский сборник.* Петрозаводск: Петрозаводский государственный университет, 17–27.
- 1985. *Система жанров Достоевского (типология и поэтика).* Ленинград: Издательство Ленинградского университета.
- Кийко, Е. И. 1973. Комментарии. *Достоевский Ф. М. Полн. собр. соч. в 30 томах, 5.* Ленинград: Наука, 387–398.
- Кржижановский, С. 1931. *Поэтика заглавий.* Москва: Кооперативное Издательство Писателей “Никитинские субботники”, 1–32.
- Петровский, М. А. 1928. Композиция “Вечного мужа”. *Достоевский. Труды Государственной Академии художественных наук, литературная секция 3.* Москва: ГАХН, 115–161.
- Соломина, Н. Н. 1972. Комментарии. *Достоевский Ф. М. Полн. собр. соч. в 30 томах, 2.* Ленинград: Наука, 479–481.
- Соркина, Д. Л. 1969. “Фантастический реализм” Достоевского. *Учен. зап. Томского университета 77.* Томск.
- Фридендер, Г. М. 1972. Комментарии. *Достоевский Ф. М. Полн. собр. соч. в 30 томах, 1.* Ленинград: Наука, 499–501.

Dostojevski tekstide žanrimääratlus

Artiklis tuleb juttu eelkõige autori žanrimääratlustest mis on eksplitsiitne kas tekstis endas (alapealkiri, eessõna) või laialipaisatuna kirjaniku kirjades; täpsemalt, uurijapoolse žanrimääratluse strateegia seostest autori omaga, mis kajastub alapealkirjas ja on mingis mõttes teksti osa (sama-moodi, kuigi teises plaanis, nagu ka pealkiri ise), ning saab seega uurija-refleksiooni võimalikuks objektiks. Autori- ja uurijapoolse žanrimääratluse kokkulangemine (või erinevine) võib olla tingitud nii teksti loomise ajal kehtinud žanrimääratluste normide kokkulangevusest (lahknemisest) uurijaaegsetega kui ka aspektist, milles teksti vaadeldakse. Viimasel juhul kohtame kokkulangevusi reeglina töedes, mis on pühendatud kõige erine-

vamatele (žanrimääratlusega mitte seotud) probleemidele, samal ajal kui lahknevusi leiame sagedamini teksti žanrilist olemust käsitlevates uurimustes. Vajadust kriitilise suhtumise järele autori žanrimääratlustesse kinnitab tõik, et mõningad Dostojevski teoste pealkirjad täidavad oma olemuselt alapealkirja või žanridefinitsiooni funktsiooni, justkui määratlledes teksti liigi (pole oluline, mis põhimõtteid järgides: narratsiooni, "diskursuse", teksti allika tüübi, žanri, žanri alaliigi), seejuures just nimelt "justkui", kuna nii kirjaniku alapealkirjad kui mõningatel juhtudel ka žanrimääratlused meie arvates vaid "mimkreeruvad", teevad näo, et nad on žanrimääratlused või "normaalsed" alapealkirjad. "Alapealkirjalikud" pealkirjad aga "paljastavad võtet" veelgi enam, demonstreerides seda mimikrit mitte ainult semantiliste ja süntaktiliste seoste rikkumisega (suhe märgi/nime/nimetuse/pealkirja ja denotaadi/virtuaalse referendi/teksti "reaalsuse" vahel — ja suhe pealkirja ja alapealkirja, pealkirja ja põhiteksti, alapealkirja ja põhiteksti vahel), nagu alapealkirjades, vaid juba faktilise asetsemisega pealkirja kohal.

Seega muutis Dostojevski korduvalt oma teoste žanrimääratlusi, kusjuures mitte ainult nende loomisprotsessi käigus, mis on täiesti mõistetav, mitte ainult palju aastaid pärast ümbertöötatud tekstide kirjutamist ja avaldamist, mida võiks seletada kirjaniku ebatäiusliku mäluga, vaid ka "mööda värsked jälgi" — kohe peale valmis käsikirja kirjastajale saatmist või siis avaldamist/uuestiavaldamist. Muidugi võib taoliste "ümbenimetamiste" loogikat mitut moodi interpreteerida, kuid selge on üks: Dostojevski loomingu uurijatel ei ole paljudel juhtudel võimalik järgida autori "lõplikke žanrimääratlusi" nii nende puudumise tõttu paljudes alapealkirjades kui ka nende määratluste autoripoolse "proteistliku" kasutamise tõttu erinevates kontekstides.

**Русский стих:
метрика, системы стихосложения,
просодия
(генеративный подход)**

М. Ю. Лотман

Dept. of Semiotics, University of Tartu,
Tiigi St. 78, Tartu 50410, Estonia
e-mail: mihhail@ehi.ee

Abstract. Russian verse: Its metrics, versification systems, and prosody (Generative synopsis). In the article the general verse metre theory and its application to Russian verse is addressed, allowing us, thereby, to observe not the single details, but only the most general characteristics of verse. The treatment can be summarised in the five following points:

1) the basis for the phenomenon of verse is its metrical code: the special feature of verse text is the presence of its metre (this feature is common to every verse type, to the most regular verse, as well as to *vers libre*);

2) the nature of verse metre is extralinguistic, there is no metre within a language, the latter can only induce certain limitations in choosing a metre;

3) metre is an abstract chain of translational symmetry, the elementary period of which is called verse foot (i.e. firstly, verse feet are contained in every versification system, incl. syllabic verse and free verse, and, secondly, verse feet can not be defined in terms of natural language, e.g., as the combination of short and long or accented and unaccented syllables).

4) in verse text, metre appears through the medium of natural language: verse metre is coded in terms of natural language; the nature of its codification is determined by the versification system. Hence, every verse metre can be realised in different versification systems, e.g. iambus can occur in syllabic-accentual, syllabic-quantitative, and some other versification systems;

5) verse prosody is a consequence of the influence of verse metre on the prosodics of language; the range of transformation of a language system by verse metre extends from the unification of the strength of verse accents in accentual verse to such artificial formations as the origination of long syllables in languages which lack phonological quantity.

Предварительные замечания: генеративная метрика

Настоящая работа представляет собой обобщение результатов, полученных автором в области генеративного описания общего и русского стихосложения за более чем четвертьвековой период (Лотман и Шахвердов 1973, Лотман 1974, 1976, 1977, 1985, 1986, 1987, 1995, 1996, 1998, 1999; ср также общую характеристику генеративной метрики в Лотман 1975 и 1987а.). Объем публикации определяет характер изложения: максимально обобщенный, без примеров и иллюстраций.

В 1970–80-е годы генеративизм был ведущим направлением не только в области лингвистики, но и всего гуманитарного знания. Поэтому разработка стиховедческих генеративных моделей представлялось занятием не только своевременным, но даже модным. Совершенно иной является ситуация, сложившаяся на рубеже тысячелетий: генеративистские разработки в большинстве областей поэтики и языкознания (в частности, в областях синтаксиса и семантики, где они ранее абсолютно доминировали) занимают все более периферийное положение. Однако работы, связанные с исследованиями просодии и метрики, составляют в этом смысле исключение: генеративистские по своей направленности исследования захватывают все новые области стиховедения; более того, некоторые лингвистические идеи прошли первоначальную апробацию именно в стиховедении (так, метрическая просодика является сейчас одним из ведущих направлений в фонологии, а теория оптимальности, предметом которой являются общие основы речевого продуцирования, разрабатывается главным образом именно на базе метрических исследований)¹.

¹ О том, что идеи генеративной метрики еще далеко не исчерпаны, свидетельствовала, например, международная конференция *Formal Approaches to Poetry & Recent Developments in Generative Metrics*, прошедшая в университете Торонто 8–10 октября 1999.

Думается, что дело здесь не в моде или престиже генеративной метрики, а, в первую очередь, в самой природе изучаемых объектов, соединяющих в себе, с одной стороны, простоту и симметрию общих принципов со сложным многообразием их конкретных проявлений: трансформационные отношения в сфере стихосложения имеют гораздо более очевидный и интуитивно оправданный характер, нежели в области естественного языка (другой областью, где генеративные построения оказались столь же продуктивными, является музыковедение).

Не удивительно поэтому, что многие типично генеративистские построения возникли в стиховедении задолго до “институционализованного” оформления этого подхода. Так, С. И. Гиндин убедительно показал, что подход к стиху, содержащийся в работах В. Я. Брюсова, во многом предвосхищает методiku трансформационного анализа (Гиндин 1970); если же говорить не о методах, а идеях, то здесь в качестве одного из главных предшественников генеративной метрики следует назвать В. М. Жирмунского (так, его концепция соотношения метра и ритма естественным образом интерпретируется как соотношение глубинных и поверхностных структур; Жирмунский 1925), не случайно, что его подход нашел сочувственный отклик у М. Халле — одного из создателей генеративной метрики (Halle 1968). Близок к генеративизму и подход, продемонстрированный акад. А. Н. Колмогоровым и А. В. Прохоровым в их недостаточно, как представляется, оцененной работе (Колмогоров, Прохоров 1968). Напротив, критики генеративной метрики М. Халле и С. Дж. Кейзера указывают на ее старомодность — после структуралистских разработок их подход показался шагом назад, а не вперед². После того как стало очевидным, что несмотря на ряд важных результатов и интересных разработок (в первую очередь, в работах Н. С. Трубецкого и Р. О. Якобсона) структуралистский проект в области теоретического стиховедения в целом потерпел неудачу, именно различные разветвления генеративизма определяют основное направление поисков в современной теории стиха.

² Ср. Wimsatt 1971. Можно привести еще одну параллель, на этот раз из области естественных наук: физику кристаллов, где уже издавна применяется подход, в достаточной мере аналогичный генеративному. Задачи, связанные с анализом и описанием кристаллических решеток во многих отношениях приближаются к тем, с которыми приходится иметь дело в стиховедении.

Тем не менее представляется совершенно очевидным, что многие важные проблемы стихосложения в рамках генеративного подхода в принципе не находят естественного решения. К таким проблемам относятся, например, статистические законы ритма, не выводимые из законов метра (“вторичный ритм” по М. Л. Гаспарову), ритмическая эволюция того или иного размера, а также отмеченность особыми сигналами начальных (resp. конечных) позиций текста, строфы или стихотворной строки³. И это не следует считать недостатком генеративного подхода, но закономерным свойством любого последовательно проводимого метода: он не может дать ответы на все вопросы, но лишь на те, для разрешения которых он был создан.

Основные положения

В основании предлагаемого подхода лежат несколько в достаточной мере элементарных посылок, суммируемых в следующих пяти пунктах.

1. В основе явления стихотворности лежит метрическое кодирование: отличительным свойством стихотворного текста является наличие в нем метра. (Это свойство — общее для всех разновидностей стиха: от самой регулярной силлаботоники до *vers libre*).

2. Стихотворный метр имеет экстралингвистическую природу: он не содержится в готовом виде в естественном языке (ЕЯ), структура последнего может лишь накладывать ограничения на выбор метра (и то лишь в определенной мере, ср. п. 5).

3. Метр представляет собой абстрактную цепочку трансляционной симметрии, элементарный период симметрии называется стопой. (Следовательно, во-первых, стопы содержатся в любых размерах любых систем стихосложения, в том числе и в *vers libre*, а не только в стихах силлабо-тонического или силлабо-квантитативного стихосложения; во-вторых, стопа не может определяться в ЕЯ терминах как, например, последовательность ударных и безударных или долгих и кратких слогов).

³ Разумеется, для соответствующих позиций и в рамках генеративного подхода могут быть *ad hoc* сформулированы те или иные правила (примеры таких содержатся и в Лотман 1996), однако в определенной мере они противоречат самому духу метода.

4. В стихотворном тексте метр всегда опосредован языком: метрическая структура не отражается в тексте непосредственно, но предварительно кодируется в ЕЯ терминах. Характер этого кодирования определяет систему стихосложения. Каждому метру соответствует множество систем стихосложения, например, ямб может реализовываться в силлабо-квантитативной, силлабо-тонической и нек. др. системах стихосложения.

5. Стихотворная просодия есть результат воздействия стихотворного размера на просодическую систему ЕЯ (ср. тезис Р. О. Якобсона о “насилии” стиха над языком). Трансформации ЕЯ системы при этом могут колебаться от незначительных (напр., ослабление количественной редукции в русской силлаботонике или выравнивание силы ударений в акцентном стихе) до очень существенных (напр., аруз в тюркских языках, не знающих оппозиции долгих и кратких слогов).

Все дальнейшее изложение представляет собой конкретизацию и комментарий этих пунктов.

Т.о. основными разделами теории стиха является: (1) метрика, описывающая метрические структуры на всех уровнях (включая строфический и гиперстрофический), метрические правила будут обозначаться сокращением MR; (2) системы стихосложения, т.е. описание возможных отображений метрических структур в естественноречевые; правила соответствия будут обозначаться сокращением CR и (3) просодия и ритмика, т.е. описание трансформаций ЕЯ системы под воздействием CR; просодические правила будут обозначаться сокращением PR. Порядок этот значим: метрические правила являются “старшими” по отношению к правилам соответствия и просодическим правилам (т.е. применяются до них), правила соответствия “старше” просодических (ср. п. 5).

Теория метра

В сфере словесности метричность есть специфическая особенность стихотворной речи⁴, определяющая, во-первых, ее ритмичность (т.е. периодичность чередования определенных речевых сигналов, приводящая к относительной предсказуемости их появления) и, во-вторых, наличие в стихотворной речи двойного

⁴ Подробнее о метрической прозе см. в Лотман 1999.

членения (в отличие от прозы, стихотворная речь членится не только — в соответствии с принципами ЕЯ — на слоги, морфемы, слова и т.п., но и на единицы, определяемые метром: полустишия, стихи, строфы и т.п.).

Существует несколько основных точек зрения на природу стихотворного метра (подробнее об этом см. в Лотман 1996 и 1999):

1) метр, как закономерность ритма (т.е. метр по отношению к ритму вторичен — Б. В. Томашевский, А. Н. Колмогоров в своих ранних стиховедческих работах);

2) метр, как идеальный закон, регулирующий ритмическую структуру стиха (В. М. Жирмунский);

3) метр, как структура, лежащая в основе ритма (М. Халле, С. Дж. Кейзер и др.).

Предлагаемый нами подход объединяет вторую и третью точки зрения. С одной стороны, метр является определенной конструкцией, а не просто принципом организации, с другой же стороны, метр является структурой, идеальной, с точки зрения симметрии. То обстоятельство, что метр является структурой, лежащей в основе стихотворной речи, определяет особую значимость — по сравнению с речью не стихотворной — языковых единиц, несущих метрическую нагрузку (подробнее об этом см. Лотман 1996 и 1998); симметрия метрических структур определяет периодичность стиха, его ритмичность⁵.

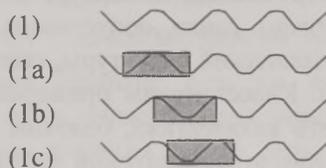
Метр представляет собой абстрактную цепочку трансляционной симметрии, элементарный период симметрии называется стопой⁶. Т.о. в наиболее обобщенной формулировке стихотворный метр характеризуется двумя свойствами: периодичностью и дискретностью.

Следует подчеркнуть, что дискретность вовсе не является обязательным свойством симметрии; дискретность метра отли-

⁵ Можно предположить, что В. М. Жирмунский определял метр как закон, а не как идеальную структуру из-за опасения возникновения нежелательных ассоциаций со “школьной” метрикой и “стопной теорией” В. Брюсова (Брюсов 1919).

⁶ Следует отметить два кардинальных отличия предлагаемого подхода от “школьной” метрики: во-первых, стопа трактуется как элемент глубинной, а не поверхностной структуры стиха (т.е. стопа образуется комбинацией абстрактных позиций, а не долгих и кратких или ударных и безударных слогов; одна и та же стопа может реализовываться в принципиально различных слоговых комплексах); во-вторых, стопа является универсальным конституентом структуры стиха, т.е. не может быть “бесстопного” стихосложения.

чает его от трансляционно-симметрических структур континуального типа. Так, в синусоиде (1) период симметрии может быть выделен бесконечным числом способов, ни один из которых не может быть предпочтен остальным; транслирование заштрихованного фрагмента в (1a), в (1b) или в (1c) образует одну и ту же синусоиду.



Цепочки трансляционной симметрии называются также раппортными композициями, а период симметрии — *раппортом*. Т.о. в основе стихотворности лежат два в определенном смысле противоположенных механизма: устремленная в бесконечность периодичность (любой текст есть выражение бесконечного в конечном; в стихотворном тексте обостряется переживание как его конечности, так и бесконечности отражаемых в нем за-текстовых структур) и разлагающая ее на принципиально ограниченные сегменты дискретность (стихотворный текст обычно содержит целое число составляющих его элементов — стихов, строф и т.п.; в случаях, эту закономерность нарушающих, текст воспринимается как незавершенный не только в метрическом отношении).

Следует подчеркнуть, что дискретность — столь же значимая характеристика метра, как и периодичность: стихотворная речь отличается от обиходной не только повышенной ритмичностью, но и повышенной расчлененностью; Б. В. Томашевский даже считал, что наличие экстралингвистического членения является более важным признаком стиха, чем его рекуррентность (Томашевский 1959; подробнее об этом — в Лотман 1999); Б. Я. Бухштаб — последователь Томашевского — определял стих как речь с двойным членением (Бухштаб 1969, 1973). Поэтому при транскрипции метрических структур должны найти эксплицитное выражение как периоды симметрии, так и границы между ними. Такого рода границы мы будем называть первичными делимитаторами (или просто делимитаторами — в случаях, когда не нужно разграничивать первичные и вторичные делимитаторы). Будем обозначать периоды симметрии и их составляющие про-

писными латинскими буквами (А, В и С), а первичные делимитаторы — значком &.

Роль делимитаторов не ограничивается разграничением элементов структуры стиха; с точки зрения соблюдения принципа симметрии границы метрических сегментов образуют область аномальных явлений: различные исключения как из метрических, так и ритмических правил встречаются, в первую очередь, в начале и окончании текста, строфы, стиха, полустихия. Особое значение имеют нарушения метрической структуры, связанные с ее наращением или усечением. Классическим примером такого рода нарушений может служить каталектика; близким случаем является наращение или усечение в предцезурной позиции. Поскольку все такого рода нарушения симметрии связаны с делимитацией, будем называть их вторичными делимитаторами и обозначать следующим образом: $(A)^-$ — если период симметрии усечен на А и $(A)^+$ — если он наращен на А.

Хотя делимитаторы (особенно вторичные) и нарушают периодичность на соответствующем уровне метрической структуры, они же способствуют образованию симметрических структур на более высоких уровнях. Так, законы альтернации клаузул, нарушающие симметрию на границе стиха, могут служить фактором строфообразования; аналогичную роль выполняет чередование стихов различной стопности в неравностопных урегулированных размерах и т.п.

Метр иерархичен. Периоды симметрии могут группироваться и образовывать периодические структуры более высокого уровня, причем этот процесс ничем не ограничен: периоды симметрии сколь угодно высокого уровня могут в свою очередь объединяться в еще большие (подробнее об этом см. в Лотман 1995). Т.о. потенциальная бесконечность метра развертывается одновременно в двух измерениях: в длину и в глубину.

Важно отметить, что когда мы говорим о таких элементах стиховой структуры, как 'стих' или 'строфа', мы имеем ввиду обычно не столько метрическую реальность, сколько историко-литературную условность, закрепленную, как правило, в стихотворной графике. Так, мы называем стихом и строку 4-стопного, и строку 6-стопного ямба, между тем, стих Я4 с точки зрения метрики является цепочкой 2-го ранга: он состоит из четырех стоп типа АВ, в то время как стих Я6 — цепочкой 3-го ранга: он состоит из двух полустихий, каждое из которых

образуется тремя стопами АВ. Еще более показательный пример — балладный септенарий (подробнее о нем см. в Лотман 1996). Стих этот имеет, скорее всего, индоевропейское происхождение, но особенное распространение получил в германском стихе. Хотя исходной, вероятно, следует считать 8-стопную форму, самой простой из реально зафиксированных является 7-стопная следующего вида:

(2) &&AAAA&AAA(A) &&

Дальнейшее развитие шло по двум направлениям, оба они касались лишь первого полустишия: оно либо, в свою очередь, разделялось пополам, давая структуры типа 2+2+3 (3), либо, напротив, удваивалось: 4+4+3 (4):

(3) &&&AA&AA&&AAA(A) &&&

(4) &&&AAAA&&AAAA&&AAA(A) &&&

Далее процесс мог повторяться, давая структуры типа 4+4+...+4+3 или (2+2)+(2+2)+3 и т.п., а также различные смешанные варианты типа (2+2)+4+3 и т.п. Что здесь считать стихом? Графика предлагает самые различные варианты, начиная от семистопной строки и кончая неравностопными чередованиями двух двустопных сток с трехстопной (самый распространенный вариант — чередование 4-стопных строк с 3-стопными)⁷. Пример балладного септенария демонстрирует одновременно и всю условность термина ‘полустишие’: “полустиший” в стихе может быть, например, три. Обычная иерархия: стопа — (полустишие) стих — строфа, — отражает не столько возможности метрики, сколько сложившуюся в европейском стихосложении традицию. Вероятно, одной из причин, почему различные варианты балладного септенария обычно не осознаются в качестве единого размера, является именно то обстоятельство, что он не укладывается в привычные классификационные схемы.

В отличие от терминов, обычно употребляемых для обозначения различных уровней структуры стиха, используемое нами понятие *ранга* метрической цепочки имеет точное

⁷ Мы не касаемся здесь проблемы рифменного членения; первоначально септенарий был формой аллитерационного стиха, при переходе к рифменному стиху 4-стопные части стали рифмоваться с 4-стопными, а 3-стопные — с 3-стопными (т.е. метрической схеме 4343 соответствовала рифменная АВАВ, метрической схеме 443443 — ААВААВ и т.д.), при разделении 4-стопной части 2-стопные составляющие, в свою очередь, часто рифмуются между собой.

содержание, определяемое процессом ее порождения и находящее отражение в ее структуре. Ранг метрической структуры будем обозначать показателем степени, в случаях, когда необходимо указать ее порядковый номер, он будет обозначаться индексом: A_i^n — начальный раппорт (т.е. период симметрии) n -го ранга, $\&^i$ — первичный делимитатор i -го ранга.

В зависимости от того, из элементов скольких типов состоят раппорты того или иного ранга, мы будем относить их к метрическим системам, соответственно, первой (MC^1), второй (MC^2) и третьей (MC^3) степени (теоретически возможны и метрические системы более высоких степеней, но в практике по крайней мере русского стихосложения они встречаются крайне редко). Все раппорты, входящие в MC^1 , состоят лишь из одного символа (следовательно, все стопы в MC^1 — одноэлементны); входящие в MC^2 — из двух и в MC^3 — из трех символов (раппорты в MC^2 и MC^3 должны состоять не менее, чем, соответственно, из двух и из трех символов, что же касается их максимальной длины, то она в принципе является неограниченной). Например, метрические структуры (5) и (6) относятся к MC^1 , (7) и (8) — к MC^2 , а (9) и (10) — к MC^3 :

- (5) $\&\&AAA\&AAA\&AAA\&\&$
- (6) $\&\&\&AAAA\&AAAA\&\&AAAA\&AAAA\&\&$
- (7) $\&ABABABAB\&$
- (8) $\&ABAABAABA\&$
- (9) $\&ABCABCABC\&$
- (10) $\&ABACABACABAC\&$

Важно отметить, что цепочки типа (5) — (10) возможны на всех уровнях структуры стиха, начиная со стопного и кончая гиперстрофическими уровнями (см. Лотман 1995). Тем не менее, по понятным причинам для метрического описания наибольшее значение имеют раппорты терминального уровня — стопы⁸. Для простоты описания первичные делимитаторы раппортов нижнего ранга опускаются (в противном случае вместо (5) следовало бы обозначать цепочку, представленную в (5) как

⁸ Терминальной называется структура, поступающая на вход трансформационного компонента модели, т.е. интерпретируемая при помощи правил соответствия.

I. Правила образования:

(MR1) $A^n \rightarrow \&^n A^n \&^n$

(MR2) $A^n \rightarrow (A^{n-k})^\pm A^n (A^{n-j})^\pm$, где $n > k$ и $n > j$.

$$(MR3) A^n \rightarrow \left(\begin{array}{l} \langle 1 \rangle \quad \&^{n-1} A^{n-1} \&^{n-1} \\ \langle 2 \rangle \quad \&_1^{n-1} A_1^{n-1} \&_2^{n-1} \quad \&_3^{n-1} A_2^{n-1} \&_4^{n-1} \\ \dots \\ \langle q \rangle \quad \&_1^{n-1} A_1^{n-1} \&_2^{n-1} \quad \&_3^{n-1} A_2^{n-1} \&_4^{n-1} \quad \dots \quad \&_{2q-1}^{n-1} A_q^{n-1} \&_{2q}^{n-1} \\ \dots \end{array} \right)$$

(MR4) (i) $A^n \rightarrow A$

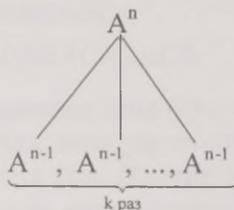
(ii) $A^n \rightarrow AB$

(iii) $A^n \rightarrow ABB$

(iv) $A^n \rightarrow ABC$

и т.п.

Смысл MR1 заключается в том, что каждый период симметрии i -го ранга отграничен делимитаторами того же ранга; MR2 определяет действие вторичных делимитаторов (вторичным делимитатором элемента n -го ранга может быть элемент любого из меньших рангов); MR3 определяют внутреннюю структуру периода (A^n): она может быть как элементарной, так и состоять из q периодов $n-1$ -го ранга:



Набор правил MR4 определяет степень метрической системы данной структуры: правила типа (MR4) (i) — MC^1 , (MR4) (ii) и (iii) — MC^2 и (MR4) (iv) — MC^3 .

II. Правила трансляции:

$$(MR5) \&^n A^n \&^n \rightarrow \&^n \&^{n-1} A_1^{n-1} \&^{n-1} \dots \&^{n-1} A_q^{n-1} \&^{n-1} \&^n$$

$$(MR6) A^n (A^{n-m}) \rightarrow \underbrace{\&_1^{n-1} A_1^{n-1} \&_2^{n-1} \dots \&_{2k-1}^{n-1} A_k^{n-1} \&_{2k}^{n-1}}_{k \text{ раз}} (A^{n-m}) \rightarrow \\ \rightarrow \dots \rightarrow \underbrace{\& A \& A \dots A \&}_{k+1 \text{ раз}}$$

(где k и $k+1$ обозначают число вхождений символа A).

MR5 определяет порядок “наследования” первичных делимитаторов: они просто транслируются с более высокого уровня. Т.о., например, строфораздел остается строфоразделом и на уровне стиха: он не отменяется стихоразделом, но и не заменяет его. MR6 определяет порядок “наследования” вторичных делимитаторов.

Приведенные правила определяют вывод метрических структур произвольной сложности. В заключение следует отметить два обстоятельства, самих по себе не очень принципиальных, но отличающих предлагаемый подход от большинства работ по генеративной метрике. Во-первых, для представления метрических структур мы используем символы A и B , а не W и S (сокращенно от *strong* и *weak position*). Делаем это по двум взаимосвязанным причинам: а) метрические элементы вообще не характеризуются силой: важно лишь то, что $A = A$ и $A \neq B^{11}$; б) Символы S и W могут быть использованы лишь при описании

¹¹ “Слабые” и “сильные” позиции — рецидив структуралистского мышления. “Сила” и “слабость” позиции не есть непосредственная данность, но лишь условность ее восприятия. Уже в трактовках античного стихосложения возникли споры о том, что есть сильная позиция: *тезис* или *арсис*; дискуссия о природе русского силлаботонического стиха со всей недвусмысленностью свидетельствуют о том, как непросто решить, какая же из позиций является “сильной”. В противоположность традиционной точке зрения, согласно которой в русском ямбе сильными позициями должны считаться позиции четные, для Н. С. Трубецкого и Р. О. Якобсона в нем отмеченными, т.е. фонологически сильными позициями являются нечетные; если отвлечься от вносящего еще бóльшую путаницу первого слога, схема ямба у них принимает следующий вид $\cup X \cup X \cup X \dots$, а не $\cup - \cup - \cup - \dots$ (где X — позиция, занимаемая произвольным слогом). Еще интереснее по Якобсону обстоит дело в русских трехсложниках, где обе позиции (и \cup , и $-$) должны считаться сильными.

метров, входящих в МС², они в принципе не годятся для МС¹ (т.е. они были введены лишь для описания метрических структур специфического типа). Во-вторых, мы не сводим трехсложные размеры к бинарным структурам (т.е., например, дактиль у нас имеет вид АВВАВВ... , а не АВАВ...¹²).

Правила соответствия

В русском стихосложении преобладают формы, основанные на одновременном использовании силлабического и акцентного принципов. Это или силлаботоника (хорей, ямб, дактиль, амфибрахий и анапест), или акцентно-силлабический стих (дольник и обе разновидности тактовика); чистая силлабика, чистая тоника и свободный стих занимают периферийное положение; их описание подчиняется сравнительно простым правилам (см. Лотман 1996 и 1998).

Ниже приводится описание основных форм русского литературного стиха. Анализ его различных форм, а также исследования в области компаративной метрики позволяют обобщить и в определенной мере упростить систему правил соответствия, предложенную в Лотман 1996.

А. Двусложные метры

Двусложными метрами называются ямб и хорей, в основе которых лежат, соответственно, метрические схемы (11) и (12) (делимитаторы для наглядности опущены).

(11) АВАВАВ...

(12) ВАВАВА...

Из этих схем двусложные размеры выводятся при помощи следующих правил соответствия:

¹² Фетишизация принципа бинарности — также является данью структурализму, в данном случае особенно неуместной, поскольку без всякой к тому необходимости вводит лишний промежуточный уровень описания.

(CR1) Каждой позиции (А и В) соответствует один и только один слог¹³.

(CR2) Односложное слово может занимать в стихе любую позицию.

Исключение из этого правила составляют случаи, когда односложное слово несет синтагматическое ударение (ср. PR8); в таком случае действует CR3. Важным следствием CR2 является то обстоятельство, что в русских двусложниках (и вообще в русском стихе) словораздел возможен после любого слога, т.е. русский стих не знает зевгмы.

(CR3) Слог, несущий синтагматическое ударение, может приходиться только на позицию В.

(CR4) Ударение неодносложного слова может приходиться только на позицию В.

CR4 не означает, что позициям В могут соответствовать лишь ударные слоги: позиции В может соответствовать безударный слог многосложного слова, но только в том случае, если ударный слог этого слова приходится на другую позицию В; что касается позиции А, то ей может соответствовать лишь либо безударный слог, либо ударение односложного слова (ср. CR2). CR4 является основным правилом русской силлаботоники.

Особенностью русской силлаботоники является наличие так наз. ударной константы:

(CR5) В, в позиции непосредственно предшествующей (А)&, может соответствовать только ударный слог.

Помимо своего прямого назначения, связанного с описанием вывода ритмических структур из метрических, приведенная система правил позволяет решить и ряд других проблем. В частности, она кладет конец спорам о природе русского “классического” стихосложения¹⁴: оно является именно силлаботоническим, причем силлабический принцип в нем превалирует над

¹³ CR3 не обязательно для всякого силлабо-тонического стиха; например, в английском ямбе позиции А могут соответствовать два слога; по мнению М. Халле и С. Дж. Кейзера, в определенных условиях два слога могут соответствовать и позиции В (Halle, Keyser 1971), хотя все приводимые ими примеры носят искусственный характер; при анализе реального материала нам не удалось обнаружить ни одного такого случая.

¹⁴ Так, В. К. Тредиаковский и Б. В. Томашевский считали его тоническими, Н. В. Недоброво — силлабо-тоническим и даже чисто силлабическим, Е. Д. Поливанов — тонико-силлабическим, Б. Я. Бухштаб выделял в нем две разновидности: силлабо-тоническую и акцентно-силлабо-тоническую и т.п.

тоническим (с точки зрения эстетики стиха можно было бы сказать, что силлабический принцип определяет константность ритмики, в то время как тонический — богатство ее вариативности).

Правила CR1–CR5 позволяют описать более 99.5% стихового материала. Нарушения этих правил должны рассматриваться в качестве исключений. Впрочем, у исключений обнаруживается также своя логика, позволяющая сформулировать дополнительные правила. Первое из них касается ударной константы:

(CR6) Пропуск ударения в позиции S, непосредственно предшествующей &, допускается в порядке исключения¹⁵.

Обычно применение CR6 связано с ориентацией на германскую традицию¹⁶.

Инверсия запрещается основным правилом силлаботоники (CR4); в порядке исключения она допускается при условиях: а) она приходится на начальную позицию стиха и б) она осуществляется двусложным словом. Здесь следует различать два случая (принципы транскрипции просодических структур объясняются ниже):

(CR7) &A₁B₁ ⇒ [[Xx]]#

(CR8) &A₁B₁ ⇒ [[Xx]]#

CR7 допускает инверсию только в том случае, когда осуществляющее ее двусложное слово образует самостоятельную синтагму или фразу (обычно — интонационно выделенную); такого рода инверсии особенно распространены в белом драматическом Я5 и маркируют ориентацию на английскую традицию. CR8 встречается реже и ощущается как более сильное нарушение CR4.

Стихи, не укладывающиеся в рамки, допускаемые CR1–CR8, не воспринимаются в качестве силлаботонических двусложников.

¹⁵ “В порядке исключения” означает, что в тексте допускается либо лишь один стих такой структуры, либо, если это текст значительной длины, стихи такой структуры должны быть в подавляющем меньшинстве и отстоять на таком расстоянии друг от друга, чтобы исключалась возможность возникновения ритмического ожидания (ср. *Испанцы* М. Ю. Лермонтова, где таких стихов три).

¹⁶ С точки зрения логики модели CR6 кажется избыточным: аномальным является CR5, отклоняющееся от CR4. Однако в контексте истории русского стиха “событием” является именно отсутствие ударения на клаузуле, а не постоянное его появление там.

В. Трехсложные метры

Трехсложными метрами называются анапест, амфибрахий и дактиль; в основе их лежат, соответственно, схемы (13), (14) и (15).

(13) ААВААВААВ...

(14) АВААВААВА...

(15) ВААВААВАА...

Ритмическая структура трехсложных метров обычно считается более простой по сравнению с метрами двусложными. Действительно, основная масса стихов, написанных трехсложниками, описывается одним простым правилом:

(CR9) Позиции В может соответствовать только ударный слог. Т.о., в отличие от двусложных метров, в трехсложниках 1) все позиции одного типа (в данном случае – В) выступают в функции ударной константы; 2) ударные слоги двусложных слов допускаются в позиции А, но только при условии, что при этом не нарушается CR9 (т.е. безударный слог этого слова не может приходиться на позицию В, но обязательно на соседнюю позицию А).

Исключение из CR9 составляет начальная позиция В в дактиле: ей может соответствовать и безударный слог (как уже указывалось, начальный слог в русском стихе является по сути дела произвольно ударным во всех размерах), т. е. действует правило: &В... ⇒ [х... .

В XX в. действие CR9 ослабевает и оно трансформируется в сторону CR4 (правда, в отличие от двусложников, показатель ударности никогда не опускается ниже 90%). Пропуски схемных ударений в сочетании с двусложными словами в межиктной позиции может приводить к ритмическим структурам, значительно более сложным для восприятия, нежели это бывает в двусложниках (ср. примеры в Лотман 1996).

С. Дольник и тактовик первого типа (T_i)

Дольники выводятся из тех же метрических структур, что и трехсложники с тем лишь отличием, что в дополнение к CR9 действует также правило, допускающее пропуск слога в позиции А, предшествующей В (тем самым частично отменяется CR1):

$$(CR10) A/_B \Rightarrow \emptyset, \text{ где } \emptyset \text{ — пустой символ.}$$

Т.о. ритмика дольника сводится к следующей схеме:

$$(16) \dots(x)Xx(x)Xx(x)Xx(x)X\dots$$

Поскольку пропуски метрического ударения в дольниках встречаются несколько чаще, чем в соответствующих трехсложниках, то дольниковые структуры возможно выводить не при помощи CR9, а CR4.

Тактовик первого типа образовался из дольника путем дальнейшего сокращения межиктного интервала (колеблется в диапазоне 0–2 слога), т.е. вместо CR10 действует более общее правило CR11:

$$(CR11) A \Rightarrow \emptyset$$

Ритмическая схема T_i :

$$(17) \dots(x)X(x)(x)X(x)(x)X\dots$$

Дольник и T_i образуют переходную область между силлаботоникой и чистой тоникой, в отличие от дву- и трехсложников их следует отнести к акцентно-силлабической системе стихосложения.

D. Пеоны и тактовик второго типа (T_{ii})

В Лотман 1996 было предложено новое понимание проблемы пеонов, согласно которому в основе их лежат метрические структуры типа (18), относящиеся к MC^3 , а что касается T_{ii} , то он выводится из структуры пеонического типа (такая трактовка проблемы T_{ii} в качестве одной из возможных упоминается и М. Л. Гаспаровым (Гаспаров 1974)):

$$(18) \dots VACVACVAC\dots$$

В пеонах эта схема реализуется следующим образом: символы А и В подчинены тем же правилам, что и в двусложниках (в CR4 для пеонов должна быть внесена незначительная корректива: “Ударение неодносложного слова может приходиться только на позиции В или С”), в то время как символы С образуют ударные константы.

(CR12) Позиции С всегда соответствует ударный слог.

Что касается T_{ii} , то для его вывода дополнительно используется CR11 (т.е. T_{ii} выводится из пеонов таким же образом, как дольник и T_i из трехсложников). Ритмическая схема T_{ii} :

(19) ... $(x)X(x)x(x)X(x)x(x)X...$

Просодическая структура силлаботонического стиха

А. Просодические единицы языка (обозначения и принципы классификации)

С точки зрения силлаботонического стихосложения просодические единицы (ПЕ) языка определяются словоразделами и конфигурацией ударных и безударных слогов; при описании ПЕ будем различать уровни слога, слова и синтагмы. Будем обозначать ударные и безударные слоги символами X и x соответственно, а границы между ПЕ — скобочной записью: $]]_{\#}$ — конечная граница просодического слова, $]]_{\#}]_{\#}$ — конец синтагмы (просодической фразы), в то время как проклитики и энклитики отделяются одинарной скобкой. Например: *лес* $[[X]]_{\#}$, *море* $[[Xx]]_{\#}$, *velosiped* $[[xxxX]]_{\#}$, *параллелепипед* $[[xxxxXx]]_{\#}$ и т.п.; *под стол* $[[x[X]]_{\#}$, *Ни за что!* $[[x[x[X]]_{\#}$, *за́ город* $[[X]xx]]_{\#}$, *под узды* $[[x[xX]]_{\#}$, *А вам-то что?* $[[x[Xx]x]]_{\#}$, *Пошел вон!* $[[[xX]]_{\#}[X]]_{\#}]_{\#}$, *каждый день* $[[[Xx]]_{\#}[X]]_{\#}]_{\#}$, *день за днем* $[[[X]]_{\#}[x[X]]_{\#}]_{\#}$ и т.п..

На уровне просодического слова будем различать простые и составные ПЕ. Простые ПЕ образуются одной лексической единицей, составные включают также проклитики или энклитики; обозначив первой цифрой число слогов в ПЕ, а второй — позицию ударного слога, получим следующую типологию просодических слов:

	Простые (α)		Составные (β, γ и δ)	
	α	β	γ	δ
1.1.	[[X]]#			
2.1.	[[Xx]]#	[[X]x]#		
2.2.	[[xX]]#	[[x[X]]#		
3.1.	[[Xxx]]#	[[X]xx]#,	[[Xx]x]#	
3.2.	[[xXx]]#	[[xX]x]#	[x[Xx]]#	[[x[X]x]]#
3.3.	[[xxX]]#	[[x[xX]]#	[[xx[X]]#	[[x[x[X]]#

и т.п.

Обычно распределение “одномерных” простых и составных просодических слов в силлаботоническом стихе подчиняется одним и тем же закономерностям (основное отличие заключается в том, что составные чаще разрываются переносами, чем простые; впрочем, поэты, регулярно отделяющие стихоразделами про- и энклитики, обычно разделяют переносами и простые ПЕ). Тем не менее, в русской силлаботонике простые ПЕ играют значительно более важную роль, нежели составные (ср. PR7).

В. Просодические правила в русской силлаботонике

Просодическая структура стиха определяется просодическими правилами. С точки зрения силлаботоники наибольшее значение имеют правила слогаобразования (PR1–PR4) и правила ударения (PR5–PR8).

(PR1) Слог образуется каждой гласной фонемой.

(PR2) Последовательность двух гласных считается одним слогом, если она соответствует одной метрической позиции.

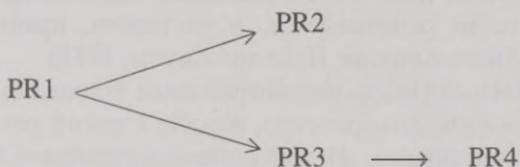
(PR3) Последовательность согласных типа ‘шумный+сонант’ на конце слова образует слог, если она соответствует метрической позиции.

(PR4) Любая последовательность согласных, отделенных словоразделами, образует слог, если она соответствует метрической позиции.

Важно отметить, что PR1, как и прочие приведенные правила, не является автоматическим следствием просодической системы русского языка, где из-за сильной количественной редуции с уверенностью можно утверждать лишь то, что слог образуется каждым ударным гласным. То, что в русской силлаботонике

количественная редукция практически отсутствует, является прямым следствием CR1. Тем не менее, PR1 обычно не воспринимается в качестве поэтической вольности, “насилия” над русским языком, оно скорее “проясняет” языковую просодику¹⁷. О PR2, PR3 и PR4 этого сказать уже никак нельзя, они и рассчитаны на то, чтобы быть заметными, внося либо элемент “иностранности” (PR2, т.к. русский язык дифтонгов не знает), либо, напротив, просторечия (PR3, PR4) в русский литературный стих. Впрочем, у некоторых поэтов конца XX века (например, у Бродского) PR3 теряет свою отмеченность, становится стилистически нейтральным.

Порядок следования просодических правил значим; PR2 и PR3 являются “отступлениями” от PR1, PR4 — от PR3:



Акцентная структура регулируется следующими правилами.

(PR5) Во всех случаях, когда позиция ударения в неодно-
сложном слове строго определена общезыковой нормой (а это справедливо для значительного большинства случаев), силлабо-
тонический стих следует общезыковому употреблению (т.е. переакцентуация не допускается)¹⁸.

¹⁷ PR1 может быть истолковано и иначе — в духе Б. В. Томашевского. В русском языке слог образуется каждым гласным, что же касается русской речи, то здесь все зависит от целого ряда факторов: темпа речи, стиля произношения и т.п. Правда, отсюда Томашевский делает фантастический вывод о том, что стили произношения и определяют различные типы стиха (между тем, как прямо противоположный вывод, согласно которому произношение стиха зависит от системы стихосложения, страдал бы лишь известной упрощенностью). Хотя природа редукции и не вполне ясна, думается, все же нет оснований считать ее лишь речевым явлением, не вытекающим из свойств языка.

¹⁸ При всей кажущейся тривиальности PR5 вовсе не обязательно для любого стихосложения, основывающегося на тоническом принципе. Например, оно не действует в русском народном стихе, где переакцентуация может являться эстетическим фактором. Чтобы убедиться, сколь значимым является PR5, полезно привести пример, решительно его нарушающий. Венгерский эстрадный певец Янош Кош в переводе (вероятно, собственного сочинения) венгерской песни переакцентуировал едва ли не все слова, так что, например, стих “Но не изменяется песня” предстает 3-стопным анапестом со сплошными мужскими словоразделами:

(PR6) В тех случаях, когда возможны различные варианты акцентуации неоднозначного слова, позиция ударения определяется правилами соответствия (т.е. ударение приходится на позицию, предусмотренную метрической схемой).

(PR7) Правила соответствия имеют ввиду только простые ПЕ; составные ПЕ нарушают правила соответствия только тогда, если их нарушают их минимальные составляющие.

Так, ПЕ типа 2.1. β ведут себя, скорее, как 1.1., чем как 2.1. α (эту закономерность впервые отметил Р. О. Якобсон, хотя и сформулировал ее в принципиально иных — фонологических — терминах; Якобсон 1923, 1973). Между тем, в речи нестихотворной простые и составные ПЕ подчиняются тем же закономерностям (заметим, что, согласно существующим описаниям, таким же образом обстоит дело и в английском 5-стопном ямбе, на этом отождествлении основывается, в частности, правило “ударной максимы” Халле-Кейзера; Halle and Keyser, 1971).

Что касается остальных ПЕ, то их употребление подчиняется, скорее, статистическим закономерностям, нежели строгой регламентации при помощи правил. Исключение составляет CR3. Градация силы словесных ударений на уровне синтагм зависит от многих факторов акцентологического, синтаксического и семантического порядка. Так, ударения на полнозначных словах заведомо сильнее, чем на неполнозначных, ударение на существительном обычно сильнее, чем на глаголе или прилагательном; вместе с тем, действует и чисто ритмическое правило, согласно которому в повествовательной фразе наиболее сильное ударение приходится на конец синтагмы. В наиболее общем виде правило синтагматического ударения может быть сформулировано следующим образом:

(PR8) Синтагматическое ударение приходится на последний полнозначный член синтагмы.

Синтагматическое ударение сдвигается с этой позиции в результате разного рода обстоятельств, связанных с актуальным членением и коммуникативной ориентацией фразы. Тем не менее, в отличие от PR8, такие синтагматические ударения с точки зрения CR3 иррелевантны.

“но-не-Из ме-ня-Ет ся-пес-нЯ” (следует отметить, что в венгерском ямбе — но не трехсложниках! — такого типа ритмические ходы допустимы).

Заключительные замечания

Изложенное выше представляется одновременно и наиболее обобщенным, и наиболее точным описанием условий функционирования метрических форм в русском стихосложении XVIII–XX вв. Разумеется, дальнейшее уточнение предложенных правил (в первую очередь CR и PR), не только возможно, но и необходимо. Так, за рамками настоящего обзора остались все просодические правила, определяющие характер фразировки стиха.

Кроме того, за рамками обзора остались акцентный стих и *vers libre*, но уже по другой причине: в отношении этих форм в настоящий момент автору нечего прибавить к сказанному в Лотман 1996, 1998 и 1999.

Литература

- Брюсов, В. 1919. *Краткий курс науки о стихе. Ч. I. Частная метрика и ритмика русского языка*. Москва.
- Бухштаб, Б. Я. 1969. О структуре русского классического стиха. *Труды по знаковым системам 4*, Тарту.
- 1973. Об основах и типах русского стиха. *International Journal of Slavic Linguistics and Poetics*, XVI.
- Гаспаров, М. Л. 1974. *Современный русский стих. Метрика и ритмика*. Москва.
- Гиндин, С. И. 1970. Трансформационный анализ и метрика (из истории проблемы). *Машинный перевод и прикладная лингвистика, вып. 13*. Москва.
- Жирмунский, В. М. 1925. *Введение в метрику. Теория стиха*. Ленинград.
- Колмогоров, А.; Прохоров, А. 1968. К основам русской классической метрики. *Содружество наук и тайны творчества*. Москва.
- Лотман, М. Ю. 1974. О взаимодействии естественного языка и метрики в механизме стиха. *Материалы всесоюзного симпозиума по вторичным моделирующим системам 1(5)*. Тарту: ТГУ, 182–186.
- 1975. Генеративный подход в метрических штудиях (обзор). *Русская филология IV*, Тарту, 88–98.
- 1976. Гексаметр. (Общая теория и некоторые аспекты функционирования в новых европейских литературах). *Studia metrica et poetica, I* [УЗ ТГУ, 396], Тарту, 31–54.
- 1977. Stress and word boundary in qualitative verse. *Estonian papers in phonetics*. Tallinn.

- 1985. Стихосложение эстонской народной поэзии в типологическом аспекте. *Слово в нашей речи* '85. Рига, 57–81.
- 1986. Проблема вольных двусложников в поэзии В. Маяковского (просодика и ритмика). *Труды по русской и славянской филологии*. [УЗ ТГУ, 683], Тарту, 66–78.
- 1987. Гексаметр в поэтических текстах новоевропейских языков. *Studia metrica et poetica. Динамика подтических систем*. [УЗ ТГУ, 780], Тарту, 40–75.
- 1987а. Генеративная поэтика. *Литературный энциклопедический словарь*. Москва, 75–76.
- 1989. Венгерская, финская, эстонская силлабика, силлаботоника и силлабометрия. В книге: М. Л. Гаспаров. *Очерки истории европейского стиха*. Москва, 232–238 (соавтор — М. Л. Гаспаров).
- 1995. Гиперстрофика Бродского. *Russian Literature* 37(2/3), Special Issue: Joseph Brodsky: 303–332.
- 1996. Русский стих: основные размеры, входящие в европейский метрический фонд. In: Pszczolowska, L.; Urbanska, D. (eds.), *Słowiańska metryka porównawcza. VI Europejskie wzorce metryczne w literaturach słowiańskich*. Warszawa, 259–340.
- 1998. Осистемах стихосложения (преимущественно на материале эстонского и русского стиха). *Труды по знаковым системам*, 26. Тарту, 201–253.
- 1999. Печальный хвост: соотношение метрического и графического членения и проблема разграничения явлений стиха и прозы. *Studia metrica et poetica. Сборник статей памяти Петра Александровича Руднева*. Санкт-Петербург, 20–50.
- Лотман, М. Ю.; Шахвердов, С. А. 1973. Некоторые аспекты теории стиха. *Сборник статей по вторичным моделирующим системам*. Тарту: ТГУ, 168–175.
- Тарановский, К. Ф. 1953. *Руски дводелни ритмови I–II*. Београд.
- Томашевский, Б. В. 1929. *О стихе*. Ленинград.
- 1959. *Стих и язык. Филологические очерки*. Москва — Ленинград.
- Якобсон, Р. О. 1923. *О чешском стихе преимущественно в сопоставлении с русским*. РСФСР.
- 1973. Об односложных словах в русском стихе. *Slavic poetics. Essays in honor of Kiril Taranovsky*. The Hague-Paris: Mouton.
- Halle, M. 1968. Rev.: Zhirmunskij 1966 (= Жирмунский 1925). *Slavic and East European Journal*, 12(2).
- Halle, M.; Keyser, S. J. 1971. *English Stress: Its Form, Its Growth, and Its Role in Verse*. New York.
- Wimsatt, W. K. 1971. The Rule and the Norm: Halle and Keyser on Chaucer's Meter. In: Chatman, S. (ed.), *Literary Style: A Symposium*. London and New York.

Vene värss: meetrika, värssüsteemid ja prosoodika (generatiivne ülevaade)

Artiklis käsitletakse üldist värssimõõduteooriat ning selle rakendamist vene värssile, kusjuures kõne alla ei tule üksikud detailid, vaid üksnes värssi kõige üldisemad omadused. Käsitluse võib kokku võtta järgmise viie teesiga:

1) värssilise aluseks on meetriline kood: värsssteksti eritunnuseks on selle meetrumi olemasolu (see omadus on ühine kõigile värssitüüpidele alates kõige regulaarsemast värssist kuni vabavärssini);

2) värssimõõdu loomus on keeleväline, keeles meetrumit pole, viimane võib esitada üksnes teatud piiranguid meetrumi valikul;

3) meetrum on translatsioonilise sümmeetria abstraktne ahel, mille elementaarset sümmeetrilist perioodi nimetatakse värssijalaks (st esiteks on värssijalad kõikides värssisüsteemides, sh silbilises ja vabavärssis, aga mitte üksnes silbilis-rõhulises ja silbilis-vältelises; teiseks, värssijalga ei saa defineerida loomuliku keele terminites, nt lühikeste ja pikkade või rõhuliste ja rõhutute silpide kombinatsioonina);

4) värssstekstis esineb meetrum loomuliku keele vahendusel: värssimõõd kodeeritakse loomuliku keele terminites. Selle kodeerimise iseloomu määrab värssisüsteem. Seega võib iga värssimõõd realiseeruda erinevates värssisüsteemides, nt jamb võib esineda silbilis-rõhulises, silbilis-vältelises ja veel mõningates värssisüsteemides;

5) värssi prosoodia on värssimõõdu mõju tagajärg keele prosoodikale; meetrumi mõjul keelesüsteemi transformeerumise diapsoon ulatub alates värssirõhkude tugevuse ühtlustamisest rõhulises värssis ja lõpetades selliste kunstlike moodustustega nagu pikkade silpide tekkimine keeltes, kus pole fonoloogilist kvantiteeti.

V. Nabokov's "Bend Sinister": A social message or an experiment with time?

Marina Grishakova

Dept. of Comparative Literature, University of Tartu,
Ülikooli 17, Tartu 50090, Estonia
e-mail: marina2@ut.ee

Abstract. The paper examines V. Nabokov's "strange" novel "Bend Sinister". The fictional space of the novel is regarded as a process of interaction of different languages or different versions of reality. The philosopher Krug's story unrolls in the imaginary totalitarian state whose ideology combines the elements of fascism, communism and the language of mass psychology. At this level the text is identical with a "social message". The protagonist has to choose between a "private autonomy" and a "bad solidarity". The paper offers the new facts and documents referring to the key symbols of the novel. The language of "reality" is deconstructed in the protagonist's idiosyncratical language, the language of his thoughts, recollections and dreams. Scientific metaphors are crucial in the deconstruction and help to reveal metafictional nature of the text. The analogies with painting, relativist physics, logical paradoxes (Russell's and Gödel's theories) permit to investigate the status of the fictional space, its development in time and the fiction of the Author.

*Or is "outer" and "inner" an illusion too, so that
a great mountain may be said to stand a thousand
dreams high and hope and terror can be as easily
charted as the capes and bays they helped
to name?*

(Nabokov 1974: 146)

Nabokov's "Bend Sinister" has been repeatedly evaluated as a strange or not quite successful text. There were few critical responses to it in 1947 when it was published and it is still surrounded by certain critical

perplexity, although a number of scholars have paid close attention to it. D. Barton Johnson's thematic analysis (Johnson 1985: 185–223) and P. Tammi's narratological analysis in terms of the auctorial "incomplete control" over the text (Tammi 1985: 115–125) is especially revealing. Basing ourselves on these investigations, we will attempt to place the text into the context of culture and to examine it as a process of interaction of different languages.

The perplexity is probably caused by Nabokov's flat rejection of any general ideas and social comments applicable to "Bend Sinister" and by his delineation of the novel as an author's fantasy (Nabokov 1974: 6–7). Despite the author's will to prevent a "social intent" in the critical appraisal of the novel, the latter has been accepted as a parallel to other anti-totalitarian texts containing a "social message" ("Invitation to a Beheading", "Tyrants Destroyed", etc.). In the Introduction of 1963, Nabokov denied any didactic or allegorical goal, any "serious" idea, but admitted that "certain reflections in the glass directly caused by the idiotic and despicable regimes" can be distinguished in the book: "worlds of tyranny and torture, of Fascists and Bolsheviks, of Philistine thinkers and jack-booted baboons" (Nabokov 1974: 6). The text might be understood more precisely as a system of contradictory elements both maintaining and undermining the "social message". The language of ideology is juxtaposed to the protagonist's idiosyncratical language. The philosopher Adam Krug refuses to accept the language of the social "conspiracy" since the people involved (classmates, colleagues, acquaintances) belong to his personal world: he is "re-writing" the totalitarian idiom and decomposing it into private human meanings. His philosophical method is defined as "creative destruction" of any closed, finite and therefore mythological system (Nabokov 1974: 145–146). The tension between the languages reaches its top point in the episode of protagonist's death while he attempts to re-turn the situation into the idiosyncratical recollection of a schoolgame or fight to subdue the dictator. The narration simultaneously opens at the level of the author-narrator whose presence permeates protagonist's idiosyncratical language as its "inner form".

1. The social message

According to the Introduction, "the greater part of the book was composed in the winter and spring of 1945–46" (Nabokov 1974: 5), but

the work started already in 1942. Certain published and unpublished documents of the time should be appropriately related to the novel since they point at its key symbols and motives. On February 4, 1944, New York Browning Society invited Nabokov to give a talk and sent him a leaflet containing the schedule of meetings and description of lectures. The Society was founded to study and popularize Robert Browning's life and works, but it was engaged in other educational activities as well. As one can learn from the leaflet, German culture was a focus of the Society's interests in 1944. The description includes a report on Prof. Schneider's lecture on German philosophy accompanied by some observations on totalitarian elements in the German philosophical thought from Hegel to Nietzsche. The editor of the leaflet remarks:

... though it is a strange indictment to bring against philosophers, of all people, very humbly I would suggest that the German people are less to blame for misapplication of their ideas than are philosophers to blame for failing to see the logical and natural outcome of those ideas, when translated into action.

So philosophy is interpreted as a practical activity or spiritual leadership. The philosophical image of Adam Krug, a solitary, free "hunter" in the kingdom of thought, might have been consciously opposed to this "applied" philosophy. The leaflet ends with the following statement:

The German people must save themselves. The final picture cannot be that of a fully armed, powerful world force holding Germany in subjection — the final picture must be that of an aroused higher Germany, armed with the might of truth and right, standing, as does the higher nature of man in George Gray Barnard's famous statue, upon the vanquished form of her own cruel, bestial, depraved nature.

Miss Henrietta Green closed our December meeting with the singing of Schubert's "Gretchen am Spinnrode". In the last plaintive notes of that fresh, youthful voice, in the words "Mein hertz is sehr", one could fancy that one heard the pathetic cry of the submerged, tortured Germany, the gentle, kindly, friendly Germany, pleading for a chance to survive. That it be given a chance, is as important for the rest of the world as it is for Germany (Letters, folder 118).

The outlook for the future rebirth overshadows the ominous historical events, the actual historical tragedy of Germany related to *similar* ideas of national rebirth and might. Nabokov's fierce anti-German letter in reply where he turns to the literal, biological meaning of "na-

ture" is an obvious reaction to the "metaphysical" phraseology and presumed political innocence of the leaflet:

I have lived in Germany for 17 years and am quite sure Gretchen has been thoroughly consoled by the secondhand, somewhat bloodstained, but still quite wearable frocks that her soldier friend sent her from the Polish ghettos. No, I am afraid we shall never see the Barnard statue in a German impersonation. It is useless looking at a hyena and hoping that one day domestication or a benevolent gene will turn the creature into a great soft purring tortoiseshell cat. Gelding and Mendelism, alas, have their limits. Let us chloroform it — and forget. (Nabokov 1991: 47–48).

The letter is directed against a straightforward interpretation of the European situation through democratic ideas. George Gray Barnard's name is not casual: the artist was famous for his sculptural illustrations of the American democracy ("Struggle of the Two Natures in Man", 31 allegorical figures "Broken Laws" and "Laws We Keep", the statue of Lincoln). "A tortoiseshell cat" as a symbol of a "domestic" and "gentle" Germany appears in the episode of an emergency session at University President Azureus' place in "Bend Sinister" (Nabokov 1974: 43–44). It is probably worth to note that in the Soviet tradition the sentimental dictator and a cat are the usual pair in children's literature on Lenin. Nabokov made use also of the "Gretchen" metaphor. In the novel, the Bachofen sisters, outwardly erotic and submissive, actually cruel, practical and deceitful represent Germany-Gretchen. Mariette Bachofen exposed to the violence of soldiers embodies "the gentle, kindly, friendly Germany, pleading for a chance to survive". The theme of Nazism as a violence inflicted "on the gentle, cultured German people" (Boyd 1992: 86) emerges also in "Double Talk" and "Pnin". The following passage evokes the style of the leaflet and discredits the apprehension of culture as an autonomous, safe and "innocent" entity:

...she was selected to die and was cremated only a few days after her arrival in Buchenwald, in the beautifully wooded Grosser Ettersberg, as the region is resoundingly called. It is an hour's stroll from Weimar, where walked Goethe, Herder, Schiller, Wieland, the inimitable Kotzebue and others, "*Aber warum* – but why – " Dr Hagen, the gentlest of souls alive, would wail, "why had one to put that horrid camp so near!" for indeed, it was near – only five miles from the cultural heart of Germany – "that nation of the universities", as the President of Waindell College, renowned for his use of the *mot juste*, had so elegantly phrased it when reviewing the European situation in a recent Commencement speech, along with the compliment he paid another torture house, "Russia – the country of Tolstoy, Stanislavski, Raskolnikov, and other great and good men" (Nabokov 1997: 113).

Nabokov notes approvingly the following idea of the leaflet: "In Goethe, it is true, were found what seemed to be fundamental flaws in character, flaws which seem also to be inherent in the type of German now in power" (Letters, folder 118). "Bend Sinister" is permeated with polemical allusions and references to Goethe. For example, a paraphrasis of the famous Goethe's statement: "I am born to lead as naturally as a bird flies" (Nabokov 1974: 27). The story of the production of "Hamlet" in the State Theatre where "Osric and Fortinbras have acquired a tremendous ascendancy over the rest of the cast" (Nabokov 1974: 96) contains a reference to the staging in "Wilhelm Meister's Apprenticeship": the actress and the producer, "like Goethe, imagine Ophelia in the guise of a canned peach: 'her whole being floats in sweet ripe passion,' says Johann Wolfgang, Ger. poet, nov., dram. & phil. Oh, horrible" (Nabokov 1974: 104). Therefore the interpretation of "Hamlet" as "a play founded upon young Fortinbras' attempt to recover the lands lost by his father" with clear racist and anti-Semitic connotations (Nabokov 1974: 97) presents evidently *reductio ad absurdum* of Wilhelm Meister's version of Shakespeare where an essential part of action is transferred to Norway and Hamlet is a blond and blue-eyed Nordic hero.

All these allusions and explicit statements by Nabokov are, of course, clear "social comments". But, in Nabokov's own words, "Bend Sinister" is first of all a story of the protagonist and his creator. Nabokov's letter to his fellow-émigré Zenzinov (March 17, 1945) indicates a contradiction underlying the plot of "Bend Sinister": it is, in R. Rorty's terms, the theoretical incompatibility of "private autonomy" and "solidarity" (Rorty 1989). Nabokov's indignant remark was caused by V. Maklakov's, the official representative's of the Russian émigrés in France visit to the Soviet embassy:

I can understand denying one's principles in *one* exceptional case: if they told me that those closest to me would be tortured [to death — M. G.] or spared according to my reply, I would immediately consent to anything, ideological treachery [betrayal of principles — M. G.] or foul deeds and would even apply myself lovingly to the parting on Stalin's backside (Boyd 1992: 84).

As it seems, the idea of the letter is reflected in the significant symbols of "mug" (Krug, not a perfect "circle", but a "mug" in *German* or "kruzhka" in Russian: the latter might be interpreted as a diminutive of "krug" in Nabokov's playful language) and "handle" (a vulnerable point, a lever to handle, to manipulate a man) in "Bend Sinister". It is

a polemical idea: personal attachments and fears are stronger than social rules. What is called a "historical necessity" consists of personal feelings and inclinations. One should not be misled by "common goals". The "social" and "personal" meanings are often polemically juxtaposed in Nabokovian metaphors. For example, the episode of Krug's death that could be regarded as a heroic suffering in another, non-Nabokovian system of thinking, turns out to be a schoolboys' game or fight. At the same time it might reflect a real mutilation of a Tenishev school student during a football game or Nabokov's own football trauma in Berlin in 1932 (Leving 1999: 131). The moment of death is especially significant as a realization of the major Nabokovian theme of crossing a border (Levin 1998): a process of passage resists any "general" interpretations and the very idea of passage is usually eclipsed by sharp sensory, especially visual impressions. For example, Nabokov's poem "The Execution" (1928) equalizes shooting (execution) with a photographic flash. The wordplay is apparently based upon the two meanings of the English verb "shoot": "to hit or kill with firearms" and "to take shots/ pictures" (see Emerson 1912, Barthes 1981 on photography as death; cf. also the simultaneity of the photographic flash with death in "Transparent Things"). In "Bend Sinister" the writer resorts to the verb's third meaning: "to send a ball (in sports)".

Certain letters of 1944 support the interpretation. It is clear, for example, from the letters of Dr. Leon Dinkin (Letters, folder 42) that the Nabokovs consulted him about their son's health in 1944 (a stomachache of uncertain origin). The "exploratory laparotomy" (incision into the abdomen) was proposed by doctors, but Dinkin was resolutely against it and offered to bring Dmitrii to New York for further observation under his control. Dmitrii might even enter some New York school: "It may sound monstrous to you, but it is still better than gut [eviscerate] him, excuse me for such a word. I am definitely against the operation" [the translation is mine. — M. G.]. It is noteworthy that Nabokov sent a copy of "Bend Sinister" to Dinkin. The doctor thanks him for it in his letter of August 20, 1947, and reports: "I read it through one evening and half of the night and did not sleep the rest of the night. It is really sinister". Evidently "horrors" of the radical Western medicine may have no less impact on an individual sensibility than the violence of totalitarian rule which uses "the diabolical method [...] of tying a rebel to his wretched country by his own twisted heart-strings" (Nabokov 1974: 7).

A “release game”, one of the most unpleasant episodes of “Bend Sinister”, combines the aforementioned meanings (the cruelty of schoolgames, medical horrors) with the rudeness and falsity of imaginary psychoanalytical manipulations aimed at the release of the “collective unconscious”. “Personal” (autobiographical) and “social” (historical, cultural, philosophical) subtexts are systematically brought together in Nabokov’s work into singular polygenetic textual constructions (see Tammi 1999 : 34–64 on Nabokov’s polygenetism).

In April of 1946, Nabokov received the letter of M. Kaminka. From this and following letters (Letters, folder 83) he found out the destiny of his Berlin friends and acquaintances. Mikhail Kaminka was a former Tenishev student like Nabokov. His father, August Kaminka, a prominent Russian lawyer, scholar and political figure, fled to Berlin from the Bolshevist regime. M. Kaminka describes the death of his father in a German camp in Latvia or Lithuania: it is evident from the letter that he had stayed in the camp voluntarily, despite the permission of the German authorities to go free obtained by his wife. Mikhail expresses the hope that his father could have used the poison he had prepared in case of Bolshevik arrest. But the Bolsheviks turned out to be tolerant to both A. Kaminka and Nikolai Vasilievich (Yakovlev?). These men took refuge in the Baltics after they left Berlin and soon found themselves between the two dangerous regimes: the condition probably symbolized by Adam Krug’s “intermediary” position on the bridge in Nabokov’s novel. Their fate was different. M. Kaminka describes also his mother’s painful diseases after her husband’s death.

Another man very significant for Nabokov and mentioned in M. Kaminka’s letter was the philosopher Grigorii Landau. On my opinion, he might have been one of the possible prototypes for Adam Krug (a philosopher who started from the philosophy of history and ended as an aphorist — cf. Landau’s “The Twilight of Europe” and “Epigraphs”). The Bolsheviks offered him a return to Russia and collaboration. M. Kaminka assumes that he might have been then subjected to “Gletkin” tortures (see A. Koestler’s “Darkness at Noon”) or, to the contrary, might have been one of the very few Jews who survived in Latvia. Now it is known that Landau died in the Soviet camp in Siberia (Ravdin 1994).

“The Twilight of Europe” examines the inner tensions of the European space between the two world wars and to a certain degree anticipates the social criticism by European and American intellectuals after World War II. The book brings us closer to the reasons of Nabokov’s

distrust of democratic slogans which sometimes disguise totalitarianism. According to Landau, in World War I the allies destroyed Germany in the name of an ideal, unhistorical aim of "absolute peace". They proclaimed this sacred idea, and not their own profit or benefit, to be the genuine goal of the war. It was not a war against Germany but the War against premises of any future war and injustice nesting in Germany. Pacifism itself becomes a tool of the war to compel all dreamers and compassionate people not indifferent to the suffering of other human beings to take the side of enemies of Germany. We would call such an ideological challenge the "abuse of solidarity" following R. Rorty's understanding of "solidarity" as a capacity to sense cruelty and other people's humiliation (Rorty 1989).

Landau supposes that the easy birth and spreading of "absolute" ideas are maintained by the common history of modern Europe. The common space of European culture has produced extremely close and intense communications and the feeling of accessibility of any goals. Idealistic maximalism is inherent in the proud and conceited European culture. In creative work, this pride is justified: being ineffective without competence and beneficial in "experts" or "professionals", it becomes dangerous while descending from "heroes" and "creators" to the ignorant "public". The pride spreads with consummate ease in the social and political sphere where everyone participates in action and shares self-confidence with others. Mass culture is governed by approximateness: it lacks the exact notions and weighted promises of experts. It is clear, says Landau, where this slope leads us when a crowd of professional leaders of society (politicians, journalists, preachers, ignorant writers and teachers) steps on it: shepherds themselves belong to the herd. The common ground of contemporary communications produces the effect of "flatness": the society overgrows old systems of thought developed by humankind by means of hard work and inherits only naivety instead of spontaneity and rationalism instead of wisdom. The masses imagine that it is easy to arrange the world according to their reasonable wishes.

According to Landau, Germany had accumulated a considerable creative potential by the early 20th century. The defeat of Germany in the First World War was the defeat of Europe. The triumph of masses started. It seems that Landau's diagnosis has had an impact on Nabokov's ideas of "Ekwilism", "the Party of an Average Man" and all symptoms of oblivion of history and mental degeneration in the Padukgrad inhabitants. A. Dolinin wrote that Landau's pathos of

European energies and creativity had probably influenced the conception of “Glory” (Dolinin 1999, 206). In “Bend Sinister” other, anxious thoughts about European history break out. They are close to Landau’s reflections on the unstable balance of democracy and totalitarianism.

Landau’s thesis on the easy accessibility of an “extreme” idea could also attract Nabokov’s attention: the real growth of knowledge consists in the accumulation of axiomata media, intermediate steps. The irrationalism of “ideal aims” destroys the living reality. Reality descends to an inferior level or falls into an abyss. The idea of the destructiveness of “idealistic maximalism” is also prominent in “Lolita”, where it assumes a form of the Romantic-decadent solipsistic quest for the lost or imaginary beloved and entails Humbert’s obsessive actions.

Landau’s book contains the polemics with Spengler, his notions of organic growth and decline of cultures (cf. polemics with Spengler in “Glory” and “The Gift” — A. Dolinin 1999, 204–206). Landau asserts that the highest functions of culture contradict its “organic”. The superdevelopment or supertension of an isolated function in an organism contradicts its organic wholeness and causes its destruction. The existence of the highest functions of culture (such as, for example, philosophical thinking) is possible only if there are forces and materials free from organic development. Contradiction is an essential form of life and dissatisfaction is a basic law of it. The more developed a culture, the sharper this tragic contradiction. Nabokov’s permanent opposition to the systems which pretend, like Marxism or psychoanalysis, to be able to resolve contradictions and to fulfill wishes, is well-known. A contradiction underlies “Bend Sinister”: Adam Krug’s heavy body belongs to the restricted physical reality, his consciousness strives for infinite freedom. The contradiction is not an expression of the traditional Romantic-Symbolist dualism of nature (of the “inward” and “outward” reality): it is inscribed into scientific metaphors.

2. The philosophy of time: Nabokov and Dunne

In the unpublished chapter of “Conclusive Evidence” Nabokov, who refers to himself in the third person, mentions “Mr. Nabokov’s method of referring to himself in the third person as “Sirin”:

One is reminded of those problems of “objectivity” that the philosophy of science brings up. An observer makes a detailed picture of the whole uni-

verse, but when he has finished he realizes that it still lacks something: his own self. So he puts himself in it too. But again a "self" remains outside and so forth, in an endless sequence of projections, like those advertisements that depict a girl holding a picture of herself holding a picture of herself holding a picture that only coarse printing prevents one's eye from making out (Nabokov 1999: 128; the chapter was written in 1950)

The outlined problem arises together with the discovery by relativist physics of the impossibility to describe the world without including a human "observer". Some relativist allusions in Nabokov's work have been pointed out already (Grishakova 1999; Grossmith 1991). The Einsteinian system is based on the observation of two (or more) observers, but ignores the existence of the "last" observer: there must be the third observer (the fourth, the fifth, etc.) observing the previous observers. That was the point of the critique directed against the theory of relativity by John William Dunne, a British philosopher of science. Modern physics actually refers to the Pascalian philosophy of the "Hidden God" and the "truth" as a matter of point of view or perspective (Grishakova 1999). Blaise Pascal "aura été le premier à jouer systématiquement du paradigme à des fins philosophiques et/ou apologetiques, et à en jouer en pleine conscience de ses implications théoriques" (Damish 1987: 63).

The Pascalian subtext and the fiction of the "invisible observer" as the Author of the World vs. the author of the text appears already in Nabokov's Russian novels. Vera Nabokov's letter of June 15, 1961, on behalf of her husband, to the American publisher of "Lolita" Walter Minton contains a significant indication: "DAR consists of five chapters, four of these are written by the author (as invisible observer), the fifth (No. 4 in the sequence) purports to be the work of the main protagonist" (Letters to G. P. Putnam's sons). Another important author's remark accompanies M. Scammell's typescript translation of "The Gift" (the end of chapter 4, Busch's speech on the atom-universe): "Busch in his grotesque way expresses a deep and important theory, and its meaning should be brought out clearly, despite the ranting" (Dar: 249). Busch's ranting and grotesque speech refers to Fragment 72 (Brunschwicz's numeration) of Pascal's "Thoughts" which develops an idea of the immensity of the universe: "The whole visible world is only an imperceptible atom in the ample bosom of nature. No idea approaches it. We may enlarge our conceptions beyond all imaginable space; we only produce atoms in comparison with the reality of things. It is an infinite sphere, the centre of which is eve-

rywhere, the circumference nowhere". Each smallest part of nature is an "abridged atom" of its immensity: there is "an infinity of universes, each of which has its firmament, its planets, its earth, in the same proportion as in the visible world". Man is "a mean between nothing and everything":

What will we do then, but perceive the appearance of the middle of things, in an eternal despair of knowing either their beginning or their end. All things proceed from the Nothing, and are borne towards the Infinite. Who will follow these marvelous processes? The Author of these wonders understands them. None other can do so (Pascal: 1958: 16–18).

Pascalean allusions are related to Nabokov's implicit polemics with the theory of relativity. The distinction between the "inward" and "outward" space is illusory: it is just a *habit* of our thinking since the world contains immeasurable worlds enclosed one within the other. Human knowledge is inevitably partial, only the Author of the Universe can play the role of the privileged "objective" observer. The polemics is taken up again in Ada's letter on "physics fiction" in "Ada": "Elaborating anew, in irrational fabrications, all that Cyraniana and 'physics fiction' would have been not only a bore but an absurdity, for nobody knew how far Terra, or other innumerable planets with cottages and cows, might be situated in outer or inner space: 'inner', because why not assume their microcosmic presence in the golden globules ascending quick-quick in this flute of Moët or in the corpuscles of my, Van Veen's — (or my, Ada Veen's) — bloodstream" (Nabokov 1970: 258–259).

J. W. Dunne proposed the theory of serialism to resolve the problem of the "last" observer. In Chapter 2 of "The Serial Universe" he uses the following example to illustrate his ideas. A painter who escaped from the lunatic asylum began to draw a picture of the universe. He painted the landscape as he saw it, but noticed that something was missing and soon understood that *he* himself was missing as a part of the universe. "With the remorseless logic of the lunatic" (Dunne 1934: 30) the insane artist proceeds to expand his picture, portraying himself as a part of the universe, then adding again himself who is aware of his own existence, etc. etc. — the multiple picture with an increasing number of artists of increasing capacity.

The artist is trying to describe in his picture a creature equipped with all the knowledge which he himself possesses, symbolizing that knowledge by the picture which the pictured creature would draw. And it becomes abundantly evident that the knowledge thus pictured must always be less than the

- knowledge employed in making the picture. *In other words, the mind which any human science can describe can never be an adequate representation of the mind which can make that science* (Dunne 1934: 32).

As Dunne infers, one can systematically (rationally) treat the condition that we are self-conscious creatures aware of something other than ourselves, only exhibiting it in the form of an infinite regress and viewing all experience in terms of time: "The notion of absolute time is a pure regress. Its employment results in exhibiting us as self-conscious observers" (Dunne 1934: 34). In the above-cited passage from the unpublished chapter of "Conclusive Evidence" Nabokov apparently borrowed the argument from Dunne. But was not the parable of the insane artist the conceptual kernel of "Pale Fire": mad Kinbote imposing himself on Shade's life and poetry by means of his obsessive commentary, but also the author who endeavours to express himself through a series of imaginary literary substitutes? A similar parallel between the "self-conscious" novel technique and the "self-conscious" landscape painting appears already in "The Real Life of Sebastian Knight" (1941):

...The *Prismatic Bezel* can be thoroughly enjoyed once it is understood that the heroes of the book are what can be loosely called "methods of composition". It is as if a painter said: look, here I'm going to show you not the painting of a landscape, but the painting of different ways of painting a certain landscape, and I trust their harmonious fusion will disclose the landscape as I intend you to see it (Nabokov 1995: 79).

In "An Experiment with Time" Dunne emphasizes that the things which belong to the core of human experience (sensations of colour, sound, etc.) are not explainable in the frame of objectivist science: "Physics is, thus, a science which has been expressly designed to study, not the universe, but the things which would supposedly remain in that universe if we were to abstract there from every effect of a purely sensory character" (Dunne 1973: 18). The scientific procedure consists in pushing the observer as far back as possible,

reducing him to the level of a helpless onlooker with no more capacity for interference than has a member of a cinema audience the ability to alter the course of the story developing before him on the screen. <...> It is a permanent obstacle in the path of our search for external reality that we can never entirely get rid of this individual. Picture the universe how we may, the picture remains of our making (Dunne 1973: 21).

According to J. W. Dunne, this obstacle cannot be removed, but can be acknowledged and used in experimental knowledge based upon the notions of time and the moving observer. It is not Time, but the observer who moves. He observes, i.e. his field of presentation (a brief span of attention, the “now”) moves within Time. The Time substratum exists constantly: the past, the present and the future are simultaneous. But the observation itself (the movement within the Time dimension) takes time. It is another time, the time of the higher order: it transpierces the primary time in its past, present and future. So the distinction is drawn between events observed and observational events. Time is serial and there is the serial observer. The first observer exists in the usual three-dimensional space where the fourth dimension is time. The primary time is the fourth spatial dimension for the four-dimensional second observer whose time is the fifth dimension, etc., etc. The field of the primary observer is absent in dreams, therefore observation is wandering hither and thither (in the past and future) by flashes. That is why the “anticipation” of the future events happens in dreams. A mental barrier between the past and the future exists only when we are awake: “In reality, the associational network stretched, not merely this way and that way in Space, but also backwards and forwards in Time” (Dunne, 60). On waking, the usual three-dimensional interpretations are applied to the dream logic. The dream results from the process of observation of the higher-order observer whom man has hypostatized into the figure of “animus”, the mysterious soul that is actually equal to his own mental states: “Although the “higher-order observer” is nothing more magnificent or more transcendental than one’s own highly ignorant self, he is beginning to look perilously like a full-fledged “animus”” (Dunne 1973: 167). One may suppose that death is a phenomenon of three-dimensional continuum, a break similar to sleeping and other alternative states of consciousness.

Any world which is described from observation must be, as thus described, *relative* to the describing observer. It must, therefore, fall short of accordance with reality in so far as it cannot be thought of, by anyone who accepts the said observer’s description, as capable of containing that observer. Consequently, you, the ultimate, observing you, are always outside any world of which you can make a coherent mental picture. If you postulate the existence of other observers making different descriptions, then it turns out that *you and these observers must together form a composite observer who is not includible in the world as thus conjointly de-*

scribed. You, as part of that composite observer, retain your individuality [...]

The picture you draw shows the real world in its relation to yourself — shows, that is to say, how that world is capable of affecting you. If drawn as the composite effort of many observers, it shows how the physical world is capable of affecting Mind in general. The most important fact which emerges is that you prove to be the immortal part of an immortal composite observer... (Dunne 1973: 190).

Nabokov tried Dunne's method examining his own dreams. As it seems, the idea of the "serial observer" emerges also in his literary texts: the writer has transformed Dunne's philosophical metaphors into a literary technique. Nabokov used the edition of 1945 of "The Serial Universe" for his manuscript "Notes for Texture of Time" (1957–1961) and the third edition of "An Experiment with Time" (1934, first published in 1927) for his own experiments.

The device of the "serial observer" is at its most obvious in "Bend Sinister", "Pale Fire" and "Transparent Things". "Bend Sinister", permeated with critical references to the relativity (Grishakova 1999), may be understood as a composite dream: a preliminary title "A Person from Porlock" refers to Coleridge's famous vision. The author/narrator is "dreaming" of Krug's life. Both dream and narration are the forms of absence in three-dimensional space accompanied by the "transparency" of the latter acquired due to the higher level of observation and by the spatialization of the lower-order time. Thus the metaphor of "observation" is metafictional: it signifies a process of writing (cf. Iser 1993: 16: an act of fictionalizing turns elements of the given world into objects for observation; the fictive "implies creating a position from which the represented world becomes observable"). The time of the observation intersects the space-time where Krug lives, acts and dies. Krug is also dreaming of himself. It is a multi-level dream (cf. "I want to wake up. Where is he? I shall die if I do not wake up": Nabokov 1974: 186). His dreams are pierced by the presence of a "mysterious intruder" or "genius" (Dunne's animus), the "higher-order observer" whose associational network stretches backwards and forwards in time (Dunne 1973: 60) and who is apparently common to both the hero and author. In the state of madness, which is another form of absence in three-dimensionality, Krug "suddenly perceives the simple reality of things and knows but cannot express in the words of his world that he and his son and wife and everybody else are merely my whims and megrims" (Nabokov 1974: 7). The border between the two worlds has become *transparent*: "Krug's conscious-

ness has at least partly merged with that of his creator, for he is now aware of events in both worlds” and hears “the cautious crackling of a page” thrown into the author’s wastebasket (Johnson 1985: 192). In the end, an author’s sudden breaking through of the “imaginary” space of the text is introduced. It is a new level of serial time where Krug’s schoolgame, death and return to his higher “self” are simultaneous, — but not the last level since the “real” Author of the text stands behind the author/narrator. As it is known from Nabokov’s letter to Edmund Wilson (cit. in Johnson 1985: 193), his initial intention was the “confrontation” of the protagonist and the author, which would apparently mean the inclusion of auctorial “unlimited freedom” into the finite mode of the “real” being.

The dream is nevertheless an unclear, imperfect form of observation, a “bad staging” with numerous unnecessary details. The similar idea is conveyed in “Transparent Things”: “Dream-man is an idiot not wholly devoid of animal cunning” (Nabokov 1972, 60). Dunne also remarks that “the dreaming mind is a master-hand at tacking false interpretations on to everything it perceives” (Dunne 1973, 67).

As it often happens in Nabokov, “Transparent Things” seems to be a twin-text for “Bend Sinister” and “Pale Fire”, the text parodying the same device of the serial observer. The “dead author”, the floating (wandering) identity of characters (a “person”, a “pilgrim”; “a person dancing in a variety of forms around his own self” — Nabokov 1972: 92), the dreamlike reality, anticipations — all these features have been already noticed.

Nabokov creates the illusion of an exact chronology based mainly on number 8, the reversed symbol of infinity. Person comes to Switzerland at the age of 22 (his father’s death follows); during the next visit he is 32, he meets and marries Armande; during the last, fatal visit he is 40 and exactly 8 years have passed (it was August when he met Armande 8 years ago, he is apparently back again in August: “there was to be, or would have been (the folds of tenses are badly disarranged in regard to the building under examination) quite a nice little stream of Germans in the second, and cheaper, half of August” — Nabokov 1972: 100). 8 months (from August to March) spent with Armande are mysteriously absent in this chronology: the first appointment, honeymoon in Stresa, Person’s third visit to Europe, the hypothetical murder — all happened 8 years ago. One may suppose that Armande might have been only an imaginary point in multiple networks of time.

The very notion of "transparence" has the special, Dunnian meaning in "Transparent Things", and the last letter of R. contains an ironical hint at both the "composite observer", whose shape he is assuming before the death, and its creator Dunne:

I believed that treasured memories in a dying man's mind dwindled to rainbow wisps; but now I feel just the contrary: my most trivial sentiments and those of all men have acquired gigantic proportions. The entire solar system is but a reflection in the crystal of my (or your) wrist watch. The more I shrivel the bigger I grow. I suppose this is an uncommon phenomenon. Total rejection of all religions ever dreamt up by man and total composure in the face of total death! If I could explain this triple totality in one big book, that book would become no doubt a new bible and its author the founder of a new creed. Fortunately for my self-esteem that book will not be written — not merely because a dying man cannot write books but because that particular one would never express in one flash what can only be understood *immediately* (Nabokov 1972: 84).

There is another important point which Nabokov could have made use of turning Dunne's philosophical construction into a literary technique: it is his favourite theme and device of *pattern*. Travelling in Time inevitably meets irregularities which are the movements of objects in the three-dimensional world. But a considerable amount of these irregularities might present a *pattern* for the observer. Thus, the "pattern" results from the interaction of the individual observer's attention and movement in time: it acquires its meaning only through *recurrence* and not through the unfolding a priori sense.

The early 20th century literature and philosophy had discovered the individual perceptual time. Nabokov's intention was probably the introduction of *several* individual time-orders, their "objective" exposition as *different* perceptual fields within the *single*, "subjective" field of perception, i.e. the qualitative alteration as well as expansion of the latter. The device of the "serial" observer reveals a certain affinity between the meta-fictional and meta-physical problems: the status of the textual world, its development in time, the fiction of the creator. It apparently had a personal significance for Nabokov who experienced multiple shifts in space and time before he escaped the awful "dream" of pre-war Europe.

The theme of "Hamlet" provides probably the most important key to the novel. Both the Shakespearean and Nabokovian hero need to "re-play" or "re-write" the reality in their own idiosyncratical language to handle it. Appealing again to Rorty's analysis, we agree that

Nabokov's ability to sense cruelty ("solidarity") was very high and his faith in a possibility to rationalize social life and make it free of cruelty was very weak. But the conflict of "Tyrants Destroyed" and "Bend Sinister" does not rest in the incompatibility of "private autonomy" and "solidarity": it is rather a matter of choice between a "private autonomy" and a "bad solidarity". The latter means an *abuse* of the human capacity for "solidarity" (i.e. the capacity to share other people's feelings) based on some false idea assuming a form of common emotion or conviction. As it becomes evident in the novel, there is no principal theoretical difference between the psychology of advertising and the psychology of totalitarianism. Both use the vocabulary of "solidarity" and different modes of hypnotic suggestion or "collective mysticism" to achieve their goals. The choice is difficult since the protagonist (in both Shakespeare and Nabokov) is linked to the "bad" solidarity by personal ties and memories forming a part of his private idiosyncrasy and making him especially vulnerable. He can only view the reality through the language of his "private autonomy" since the language of "solidarity" is misused and compromised. It is not his "solipsism" or indifference to the outward world, but the historical paradigm, which does not leave him any choice.

The impossibility of choice complicates also the metafictional task of "creating a position from which the represented world becomes observable" (Iser 1993: 16). The text develops as a "serial dream" of multiple observers or the different independent modes of auctorial vision. On the one side, the author is an anonymous space of the intersection of different languages. On the other side, the narrative "is evolving by degrees towards an ever greater individuation" of the author-narrator whose personal presence might be traced throughout the whole text, but whose control over the fictional worlds is "only a comparative matter" (Tammi 1985: 115). It seems that the text construction is determined not so much by the optimistic evolvement of the Infinite Consciousness of Gnosticism, but rather by the paradoxality of all attempts to imagine or to depict infinity. The final coincidence of finity and infinity in the author-persona reminds of those riddles which agitated European science in the 1920–50s: the "last" observer in relativist physics, logical paradoxes, Gödel incompleteness theorem in response to Russell's hierarchy of restrictive "types". Escher's strange pictures of the 1930–50s (Fig. 1) presented the visual analogies for logical paradoxes:

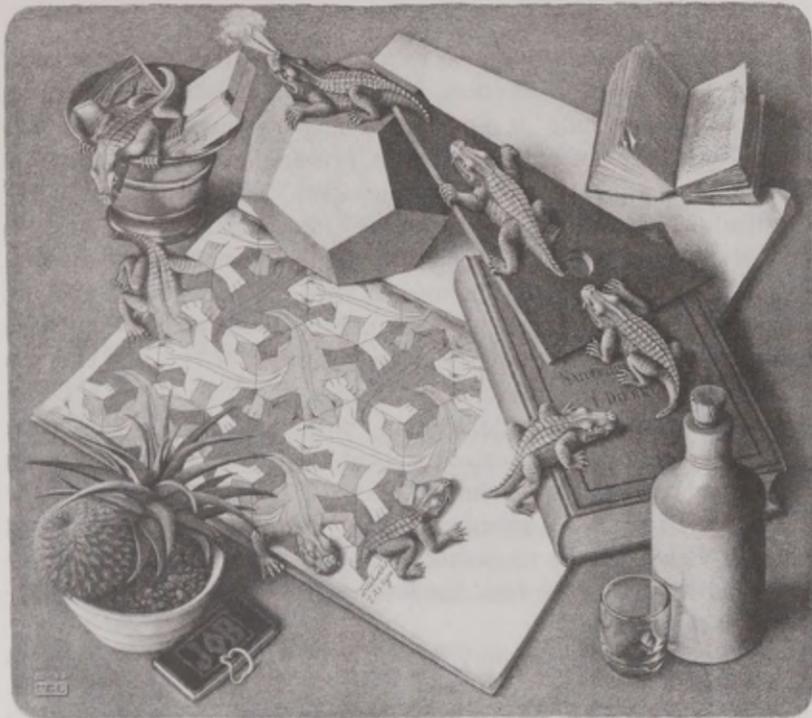


Figure 1. Reptiles. 1943.

...one single theme can appear on different levels of reality. For instance, one level in a drawing might clearly be recognizable as representing fantasy or imagination, another level would be recognizable as reality. These two levels might be the only explicitly portrayed levels. But the mere presence of these two levels invites the viewer to look upon himself as part of yet another level; and by taking that step, the viewer cannot help getting caught up in Escher's implied chain of levels, in which, for any level, there is always a level below, "more"imaginary" than it is (Hofstadter 1980: 15).

The Russellian-Gödelian analogy was applied to Nabokov's prose for the first time by Dr. Dinkin in his comments to "Ultima Thule" (January 19, 1949), a proto-text of "Bend Sinister", a fragment of the unfinished novel "Solus Rex", where the knowledge of death and after-life is considered as a *logical paradox*: "Not long ago I read a similar thought in Bertrand Russell (History of Western Philosophy): if a philosophical system is perfectly logical, without any errors or contra-

dictions, and thus well-balanced and absolutely closed in itself, it inevitably comes to incongruous results, is monstrous and loses any contact with “reality” “ (Letters, folder 42; the translation is mine. — M. G.). “Ultima Thule” is a poem in a language unknown to the narrator. The narrator, a *painter* Sineusov, sets to illustrate the poem: the illustration is a parallel to his “narratological” task, an attempt to understand the mad Falter’s “unspeakable” message. The latter, as a result of a certain “playful” combination of thoughts, is self-evident, logically inexplicable and unprovable. All endeavours to prove the existence of afterlife or to answer the question whether the word “heterological” is itself heterological (Nabokov 1990: 461) would end in a vicious circle. There is nevertheless a mysterious correlation between the world and the otherworld, a kind of cross-reference. D. B. Johnson has noticed the reverberation of the words of the narrator’s dying wife in the madman’s speech (Johnson 1985: 208), which is apparently to confirm the mysterious interdependence of the worlds. The auctorial point of view could be reconstructed as the result of the interdependence and located at the metametalevel where “the riddle of the universe” is to be solved.

In “Bend Sinister” the story is also conveyed in different languages or different versions of reality (the finite, closed and therefore “monstrous” totalitarian language; science languages; the idiosyncratical language of protagonist’s thoughts and recollections; more and more incomplete and indefinite dream languages, etc.). Put through the various realities and evolving towards infinity, the story finally withdraws back into the author-persona. The author is the “otherworld” observer of the textual imaginary physical space: he is identical with the “consciousness” of the text. But, being also involved into the text from the inside and “embodied” in it, he becomes together with it a part of the outside physical reality. So the quest for infinity ends in a “strange loop”, a finite representation of infinity: it “occurs whenever, by moving upwards (or downwards) through the levels of some hierarchical system, we unexpectedly find ourselves right back where we started” (Hofstadter 1980: 10, 15). The fictional space of “Bend Sinister” is unfolding as a chain of levels to be finally reversed into the paradoxical self-reference.

I am deeply grateful to Pekka Tammi for his valuable comments, to Mikhail Iampolskii and Richard Sieburth for the professional support, to Irina Shevelenko and Olga Skonechnaya for their assistance. I want to thank Diana Burnham and Stephen Crook who helped my work in

the New York Public Library Berg Collection. I thank also the Open Estonia Foundation for the scholarship that made this work possible.

References

- Barthes, Roland 1981. *Camera Lucida*. New York.
- Boyd, Brian 1992. *V. Nabokov. The American Years*. London: Chatto & Windus.
- Damish, Hubert 1987. *L'Origine de la Perspective*. Paris: Flammarion.
- [*Dar*. English]. The Gift. Chapters 2–5. Typescript draft of the novel, translated by M. Scammell with V. N. ms. corrections. — The NYPL Berg Collection Nabokov Archive.
- Dolinin, Aleksandr 1999. Clio laughs last: Nabokov's answer to historicism. In: Connolly, J. W. (ed.), *Nabokov and His Fiction*. Cambridge: Cambridge University Press.
- Dunne, John William 1934. *The Serial Universe*. London.
- 1973. *An Experiment with Time*. London.
- Emerson, Ralph Waldo 1912. *Journals of Ralph Waldo Emerson. 1841–44*. Boston, vol. 6: 100–101.
- Grishakova, Marina 1999. On Some Allusions in V. Nabokov's Works. *The Nabokovian*, no 43 (fall): 18–29.
- Grossmith, Robert 1991. Shaking the Kaleidoscope: Physics and Metaphysics in Nabokov's *Bend Sinister*. *Russian Literature Triquarterly* 24: 151–162.
- Hofstadter, Douglas R. 1980. *Gödel, Escher, Bach: an Eternal Golden Braid*. New York: Vintage Books.
- Iser, Wolfgang 1993. *The Fictive and the Imaginary. Charting Literary Anthropology*. Baltimore and London: The Johns Hopkins University Press.
- Johnson, Donald Barton 1985. *Worlds in Regression: Some Novels of Vladimir Nabokov*. Ardis: Ann Arbor.
- Landau, Grigorii 1923. *Sumerki Evropy*. Berlin.
- Letters to and from miscellaneous correspondents, 1925–1976*. The NY Public Library Berg Collection Nabokov Archive.
- Letters to G. P. Putnam's sons*. The NY Public Library Berg Collection Nabokov Archive.
- Levin, Jurij 1998. Bispacialnost' kak invariant poeticheskogo mira VI. Nabokova. *Izbrannye trudy. Poetika. Semiotika*. Moskva: Iazyki russkoi kultury.
- Leving, Jurij 1999. Literaturnyi podtekst palestinskogo pis'ma VI. Nabokova. *Novyi Zhurnal*, 214.
- Nabokov, Vladimir 1970. *Ada or Ardor: A Family Chronicle*. New York, A Fawcett Crest Book.
- 1972. *Transparent Things*. New York: McGraw-Hill.
- 1974. *Bend Sinister*. London: Penguin Books.

- 1990. *Ultima Thule. Sobranie sochinenii v 4 tomah. T. 4.* Moskva: Pravda.
- 1991. *Selected Letters 1940–77.* Edited by D. Nabokov and M. J. Brucoli. London: Vintage.
- 1995. *The Real Life of Sebastian Knight.* London: Penguin Books.
- 1997. *Pnin.* London: Penguin Books.
- 1999. Conclusive Evidence [The Unpublished Chapter]. *The New Yorker*, December, pp. 124–133.
- Pascal, Blaise 1958. *Pensées.* Translated by W. F. Trotter. New York: E. P. Dutton & Co., Inc.
- Ravdin, Boris 1994. *Vozvrashajas' k napechtannomu. Daugava 1.*
- Rorty, Richard 1989. *Contingency, Irony, and Solidarity.* Cambridge: Cambridge University Press.
- Tammi, Pekka 1985. Problems of Nabokov's Poetics. A Narratological Analysis. *Suomalainen Tiedeakatemia toimituksia, ser. B, tom 231.* Helsinki.
- 1999. *Russian Subtexts in Nabokov's Fiction.* Tampere: Tampere University Press.

“Bend Sinister” Владимира Набокова: социальное сообщение или эксперимент со временем?

В статье анализируется “странный” роман В. Набокова “Bend Sinister”. Художественное пространство романа рассматривается как процесс взаимодействия разных языков или разных версий реальности. История философа Круга развертывается в воображаемом тоталитарном государстве, идеология которого сочетает в себе элементы фашизма, коммунизма и языка массовой психологии. На этом уровне текст представляет собой “социальное сообщение”. Герой стоит перед необходимостью выбора между личной автономией и “плохой солидарностью”. Статья вводит новые факты и документы, образующие социальный подтекст романа. Язык “реальности” деконструируется в идиосинкразическом языке героя, языке его мыслей, воспоминаний и снов. Большую роль в этой деконструкции играет научная метафора, которая выявляет метахудожественную природу текста: аналогии с живописью, релятивистской физикой, парадоксами логики (теории Рассела и Геделя) являются способами исследования статуса художественного пространства, развертывания текста во времени, фикции Автора.

V. Nabokovi "Bend Sinister": sotsiaalne teade või eksperiment ajaga?

Artiklis analüüsitakse Vladimir Nabokovi "kummalist" romaani "Bend Sinister". Romaani kunstilist ruumi vaadeldakse kui erinevate keelte (või erinevate reaalsuse versioonide) vastastikuste mõjutuste protsessi. Filosoof Krugi lugu hargneb kujuteldavas totalitaariigis, mille ideoloogia ühendab endas kommunismi, fašismi ja massipsühholoogia keele elemente. Sellel tasandil kujutab tekst endast "sotsiaalset teadet". Kangelane seisab valiku ees — kas isiklik autonoomia või "halb solidaarsus". Kirjeldatakse uusi fakte ja dokumente, mis moodustavad romaani sotsiaalse allteksti. "Reaalsuse" keel dekonstrueeritakse peategelase mõtete, mälestuste ja unenägude idiosünkraatilises keeles. Olulist osa mängib selles dekonstruktsiooniprotsessis teaduslik metafoor, mis toob välja antud teksti metakunstilise olemuse: analoogiad maalikunstiga, relatiivse füüsikaga, loogika paradoksidega (Russelli ja Gödeli teooriad) on kunstilise ruumi staatuse, teksti ajas kulgemise ja Autori fiktsiooni uurimise moodusteks.

The book at the outskirts of culture: Cortázar's first almanac

José Sanjinés

Coastal Carolina University,
P.O. Box 261954, Conway, SC 29528-6054, U.S.A.
e-mail: sanjines@coastal.edu

Abstract. The notion of *intersemiosis* suggests the *game relationships* between the multiple interacting signifying spheres of culture, but the term can also be fitly applied to the study of certain extraordinary artistic texts. This study makes use of one such book, Julio Cortázar's *Around the Day in Eighty Worlds*, to show how the *sui generis* interplay of the book's semantic spheres simultaneously models and renews the complex cultural processes of the production of meaning. This often reprinted and hard-to-categorize book that for years has remained at the outskirts of Latin American culture is also an ideal example to explore the dynamics between the center and periphery of culture as well as the writer's role in the creative renewal of cultural *repertoires*. By drawing a bridge over the apparent gap between the semiotics of culture and the semiotics of the artistic text, the present study attempts to approximate the critical-creative spirit of the late great theoretician Yuriy Lotman.

to Glenda

The term *intersemiosis* evokes a zone of encounter and play between diverse semiotic systems, and it also elicits the frontiers between these systems. At first, the term brings to mind the semiotic structure of culture because culture is composed of a multiplicity of heterogeneous systems that are at constant interplay. Moreover, a culture is never found by itself; a culture is defined by contrast to other cultures (thus the common distinction of *we* vs. *they*), and a culture is renewed by its interaction with other cultures (some of the most exciting "hot spots")

of semiotic dynamism are the result of the clash and mix of two or more opposing cultural *repertoires*¹). Intersemiosis also brings to mind art forms composed of more than one semiotic language such as cinema, audio-visual performances, or books containing both verbal and visual signs.²

Upon further consideration, however, one can see that the concept of intersemiosis can also be fitly applied to the description of any complex system in which semantic units enter into a play of contrasts and correspondences. The iconic principle of verbal art, natural language's capacity to generate images in the reader's mind, for instance, makes of literature a space of intersemiosis in which the narrative and iconic aspects of language are in constant interaction and tension. These two aspects, the capacity to *tell* and to *show*, are perhaps the most obvious, but by no means the only, forms of intersemiosis in the literary text. Let us take one more example. The old practice of rhetoric, as the late French theorist Roland Barthes pointed out in *L'ancienne rhétorique*, conceived language as being composed of two distinct states of semiosis: "there is a naked, pure level of communication, a base from which one can construct a more complicated expression, *adorned*, gifted with a larger or smaller distance with respect to the original base" (Barthes 1974: 72–73). The interaction in a given text between these two elementary rhetorical states can also be understood as a form of intersemiosis.

It should be noted here that the amount of information generated by the process of intersemiosis — what we may call the semiotic richness of a complex system — may depend more on the semantic distance between different forms of semiosis in a single medium than on the congruence of signs produced in different media: a traditional illustrated book in which the visual art strives to correctly translate the verbal images, or a situation comedy in which canned laughter interprets for the viewer the humor of a scene, for instance, can say less than the unexpected juxtaposition of seemingly incompatible verbal images in a poetic text.³ The coexistence and tension between distant

¹ I use the term *repertoire* here in the sense given to it by Israeli semiotician Itamar Even-Zohar (1999: 7), that is, the invented set of cultural options by means of which we conduct our lives.

² The notion of illustrated book, as I have argued before (1993), inadequately describes the complex semiotic interactions between verbal and visual signs in the art form of the book.

³ The principle of the production of meaning by means of the encounter of distant semantic realms is not only central to the poetics of western artistic manifestations

semiotic systems is also one of the defining characteristics of culture. I am referring here to culture as seen from a critical, external perspective, that is, from a metasysemic point of view, and not to the usual conception of culture as seen from the inside which validates and accepts some cultural manifestations and excludes others.

As Yuri Lotman described in *The Universe of the Mind* (1990), customary semiotic systems at the core of a given culture are in constant dialectical tension with divergent and unconventional systems at the periphery. Lotman was drawing from the relatively young tradition of cultural semiotics. The idea that, seen from the outside, “the mechanism of culture is a system which transforms the outer sphere into the inner one: disorganization into organization, ignoramuses into initiates, sinners into holy men, entropy into information” (Uspenski 1998: 34), was first proposed in 1973 by B. A. Uspenski, V. V. Ivanov, V. N. Toporov, A. M. Pjatigorski, and Lotman himself in the seminal “Theses on the Semiotic Study of Cultures.” The “game relationship” (36) between the outer and inner spheres of culture that these authors identified must be understood in the context of the complex interplay of semiosis between the myriad of competing codes and structural levels in a given culture.

It is in this context that I would like to discuss here an extraordinary book that seems to me not only to model the processes of cultural intersemiosis, but that also seeks to redefine and renew them, a book informed by the “classics”⁴ yet unusually receptive to the undervalued worlds of semiosis at the edge of culture, a revolutionary text open to anything that might happily deautomatize our expectations of art, culture, and life. I am referring to *La vuelta al día en ochenta mundos* (*Around the Day in Eighty Worlds*) written by the late Franco-Argentine writer Julio Cortázar (1914–1984). This is a book that offers us a new repertoire of ways to see the world, a deck of surprises, an unaccustomed interplay of signifying systems at play in a zone between the accepted and peripheral spheres of culture.

such as romanticism and surrealism but also to that of many oriental and pre-Columbian cultures.

⁴ Roland Barthes (1974: 24) reminds us that “the expression ‘classic’ (‘classicism’) originated in the opposition proposed by Aulo Gellio (second century) between the *classicus* and the *proletarius* author: an allusion to Servio Tulio’s constitution which divided citizens according to their fortune in five classes, the first of which was the *classici* (the *proletarii* were outside the classes); *classical*, therefore, etymologically means one who belongs to the cream of society (richness and power).” (My translation.)

When it was first published simultaneously in Mexico and Buenos Aires in 1967 by Siglo XXI Editores, *Around the Day* had an immediate impact on Latin American readers. Since then it has been reprinted close to thirty times; yet, it has never stopped being an exemplary peripheral book, and this is true both in the context of Latin American culture as it is in the context of Cortázar's corpus. *Around the Day* seems to belong today at once both to the "canon" and to the "avant-garde" of Latin American literature, it is one of those well-read books that has paradoxically received little critical recognition. Elusive to classification, the book is often described by critics in brief, cursory terms, as if it were too difficult to situate critically. This, of course, does not imply that a text can place itself outside a metasystemic cultural perspective: any text that participates in the flux and reflux of culture must be a part of it. The work of a "minor poet" or an "avant-garde artist" that may be marginal today and key tomorrow is by no means less an integral part of culture than the work of a so-called "classic" author that has managed to retain its semiotic vitality beyond the passage of time.

It has been over thirty years since the first edition of *Around the Day in Eighty Worlds*, and the book remains daring and modern. It is an extrageneric text, neither a collection of essays nor a novel, at times poetic and fictional and at others factual and journalistic, falling somewhere between the metasystemic description of cultural manifestations and the creative impulses of imagination that have the power not only to expand a cultural tradition, but also to transform and renew it. The enchanting first edition, as well as the many that would follow, is composed of both verbal and visual art and was designed in collaboration with Argentine artist Julio Silva. The numerous pocketbook editions that date to 1970 transposed most of the verbal and visual art into two slim volumes of less than 200 pages each that are meant to fit in a small pocket and travel well. I say that most of the art was transposed because Cortázar feels free to change the order of the texts, to elide and replace some of the visual art and, notably, to hold back on a series of four personal poems dating back to 1950 ("Razones de la cólera") which, as he confesses in the first edition, he had not published until then due in part, and I translate, to a "perverse pleasure of keeping mine what is most mine" (Cortázar 1967: 195). In doing so, Cortázar is consequent to his desire to write "nothing but *takes*" (Cortázar 1967: 172), in the sense given to this term in jazz to the successive recordings of the same theme.

Around the Day in Eighty Worlds is first and foremost a text intended to motivate writing and incite creativity; like a succession of jazz *takes*, each piece of the book calls for other *takes* and recreations. Consequently, the book has had its share of epigones, quite a few of them no doubt prompted by its playful and translatable title, a transposition of Jules Verne's imaginary voyage around the globe in, as I remember it from childhood readings, a rather flimsy balloon. The ingenious transposition of *Around the World in Eighty Days* to *Around the Day in Eight Worlds* signals play, and it also marks a passage from diachrony to synchrony, from a journey in which a series of concatenated adventurous events take place in a relatively lengthy period of time, to one in which a different series of no less adventurous imaginary worlds coexist simultaneously in a rather short span of time: in a single day, in the orb of a book. As the visual art in the black and white cover of both thin volumes of the portable editions prefigure, countless semantic worlds of imagination are indeed at play in *Around the Day*.⁵ In the now well-known illustration by Grandville, a mustachioed man playfully juggles countless worlds to the bewilderment of a little nineteenth century spectator who can see that one of the worlds has fallen in the juggler's pants and that another has turned into a *Croix d'honneur* which is about to crash over his head.⁶

The high degree of narrative content in the book's cover is significant — throughout the book Cortázar uses images not only that *show* but also that *tell*. Cortázar liked to swim against the current, and so he made his way *Around the Day* telling with images and showing with words, that is to say, going against the primary semiotic properties of verbal and visual signs. In *Around the Day* verbal and visual art strive to show and tell in unison;⁷ the content of both of verbal and visual modalities is polymorphous and eludes conventional expectations, and so does the book's organizing principle. *Around the Day* is at once both an aesthetically integrated and decentered constellation of semi-

⁵ In an article on the visual world of *Around the Day* ("El mundo visual en *La vuelta al día en ochenta mundos*"), Andrea Varricchio discusses the different drawing that features on the cover of one of the first hard cover editions of the book.

⁶ The illustration is by Jean Ignace Gérard, a.k.a. Grandville (1803–1847).

⁷ This is a semiotic gesture that Cortázar and Silva would take one step further in the first edition *Último round* (1969). Behind its cover, the book is split into two independent sets of pages, a larger set above and a slimmer one below, so that the pages of each set can be turned separately from each other. Thus, the reader/viewer may read a text in the upper section while viewing the visual art in the lower one or vice versa; or the he/she may choose to counterpose the pages of two sets of verbal art with two sets of visual art, or the pages of two mixed sets of verbal and visual art against each other.

otic systems, a space of intersemiosis open as much to references of what Cuban writer José Lezama Lima aptly called “the memorable, monumental culture”⁸ as it is to the discourses of the periphery.

Around the Day is indeed a hard-to-categorize book. In it we find in fraternal tension and coexistence references to jazz, Shakespeare, happenings, madness, esoteric knowledge, cats, Jack and other famous rippers, colloquialisms, a praise of idiocy, advertising, oriental mandalas, permutable poems and poems to be completed by the reader, tricks of memory, the melancholy of suitcases, boxing, hints to deautomatize daily experience, the horror of war, *kitsch*, surrealism, and always humor and many other unexpected interventions of the extraliterary and miraculously mundane. All this and much more in a rich semantic play with the distances and vicinities of a deck of visual reproductions that resemble more a tarot of the uncharted than an illustrated tour.

In his introduction to *The Universe of the Mind*, Umberto Eco wishes to “draw attention to a crucial definition” (xii) in which Lotman describes the semiosphere, i.e., the space of intersemiosis in which the many codes of a given culture come into play with each other:

[...] imagine a museum hall where exhibits from different periods are on display, along with inscriptions in known and unknown languages, and instructions for decoding them; then there are also the explanations composed by the museum staff, plans for tours and rules of behaviour of the visitors. Imagine also in this hall tour-leaders and visitors and imagine all this as a single mechanism (which *in a certain sense it is*). This is an image of the semiosphere. (xii)

The dynamic complexity of Lotman’s notion of the *semiosphere* cannot of course be captured in a brief single quote. But the image of the semiosphere, and by extension of culture, as a museum is nonetheless significant.

I have suggested that *Around the Day in Eighty Worlds* is a book that models and recreates the processes of cultural intersemiosis. Indeed, many of Lotman’s descriptions of the semiosphere can be aptly applied to the description of this book. Like culture, *Around the Day in Eighty Worlds*, is a complex message composed of an array of in-

⁸ “Cortázar and the Beginning of the Other Novel” (1972: 18). As Lezama Lima suggests in the same page of this essay, Cortázar is certainly one of the best read writers of the twentieth century: Cortázar, Lezama Lima writes, “ostentatiously displayed a fan of artistic and literary references of insuperable extension”. (My translations.)

tercommunicating vessels, and like culture, too, these meaningful channels support one another and are unified in ways that uphold their independence as immanently organized systems. The initial premise of the "Thesis on the Semiotic Study of Cultures" states that "all human activity concerned with the processing, exchange, and storage of information possesses a certain unity" (Uspenski 1998: 33); this is true for a culture as a whole as much as for the individual signifying systems that comprise it.

Little if any, however, has been said about the features that distinguish the unifying principles of the work of art from those of culture. Most of the prevalent expressions of verbal art, such as the novel, the essay, the short story, and poetry,⁹ end up submitting to the impulse of logical or aesthetic coherence which at once distinguishes them from other works and secures them an inner place in the gallery of culture. In *Around the Day*, Cortázar abstains from this tendency; instead, he allows for a sort of *sympathetic magic* that coalesces various pieces of the book and resembles the secret affinities that bring together the disparate strands that intervene in a given culture.

But this is not the single unifying principle of the book. The highest form of a semiotic system is when it describes itself; this is as true in literature as it is in culture. In some of its first pieces *Around the Day* talks about itself, but it does so in such a way as to leave the door ajar for the free interplay of chance associations and unexpected encounters. It is clear that this is a text permeable to the partial and oft ignored languages at the periphery of culture, and it is clear too that it is aware of bringing them into its orb. A few pages into the book we are invited to the Cortazars' summer home in the southern French town of Saignon, where we meet for the first time their cat Teodoro W. Adorno; and in one of the last texts, at the end of *Around the Day*, Cortázar returns us to the place where the journey began: the summer has ended, the book is over, it rains; Teodoro senses the imminent departure of the couple, and the kitty is "full of whims and sprints in all directions" (Cortázar 1980: 167).

I suggested that *Around the Day* seeks to transform and renew the processes of cultural intersemiosis. This is a book that presents itself as a permeable territory open to the diverging sways of culture, a hot

⁹ Something similar can be said of most expressions of semiosis made up of non-discrete, *continuous* sign systems such as painting, music, and sculpture, as well as of other complex forms of intersemiosis such as dance, theater, television productions, and film.

zone for unexpected encounters, a model for creative acts capable of expanding the horizons of what we understand as culture. Keeping in mind and as a contrast the image of a museum, I would like to draw attention to the first piece of visual art in the book, a drawing which I will call here a *permeable aquarium* that may very well serve as an emblem for the whole book. In it, a set of fantastic critters either float or rest still in the confines of a transparent rectangular object which may be filled with air or water: among them are a horse, a cat, a bird, a wild boar, and a dog — and all of them are depicted with fish tails. These unpretentious mythical critters commingle with a little star, a clove playing card, a treasure chest, a capital letter D or A, depending on the angle of vision, a horseshoe, a lance, a wolf, a banana, a few scattered plants, and an air balloon reminiscent of the one in Verne's *Around the World in Eighty Days*. I have called this transparent rectangle a *permeable aquarium* because there are in it some partial figures — the head of a sheep, the tail of squirrel or a bunny — that seem to infuse the aquarium's margins. I also called it permeable because the book itself is organized around what we may call the *poetics of the sponge*, a semiotic territory where the real commingles with the imaginary, where jazzman Clifford Brown can freely swing in and out of the confines of classification with a caged pet mandrake. Cortázar invites us to presuppose that semiosis may be found where we least expect it: why should we reserve our enthusiasm for the night in which *King Lear* is shown when before us we see a dew laced spider web shining bright against the sun?¹⁰

A museum, it seems to me, is the sanctioned zone where the repertoire of (most often visual) cultural productions is admitted into the mainstream of culture — the extreme example, of course, was set by Marcel Duchamp, who dared to sign his pseudonym on an urinal, which he titled *Fountain*, and send it to an exhibition.¹¹ For Cortázar, who thought Duchamp's life was itself an act of imagination, the idea of culture includes not only past and present works that have become acceptable and remarkable, but also the many inadvertent surprises of

¹⁰ Cf. "Hay que ser realmente idiota para..." (Cortázar 1980: 161–167). In another ironic and confessional piece titled "The Pigeonhole of the Chameleon", Cortázar reminds us that "Nietzche, who was a *cronopio* as few others [I will return to this term later], said that only idiots don't contradict themselves three times a day" (Cortázar 1980: 186).

¹¹ Although first rejected, this famous readymade would eventually find its way to the museum and to many a respected art history book.

life that would never make it to most museums, as well as all that could be added to the world with just a little humor and imagination.

Elusive as few others, *Around the Day in Eighty Worlds*, and the 1969 book that is routinely considered to be its homologue and sequence, *Último round (Last Round)*, have been referred to in many ways and described with at best partial critical grammars.¹² Peruvian-born writer Mario Vargas Llosa, in an essay latter to be used as the preface to Cortázar's *Complete Stories*, for instance, called these books "miscellanies" (Vargas Llosa 1997: 32), a term that suggests at best a random gathering of texts; and critic Ilan Stavans — who no doubt had in mind Vargas Llosa's appraisal of Cortázar's literary legacy — dismissed them, with all the moral implications of the phrase, as "the art of literary promiscuity" (Stavans 1996: 306).¹³ A more sympathetic critic, Monique J. Lemaitre, who identified in these two books many a practical example of the theories exposed by Jacques Derrida, referred to them as "unwritten novels."¹⁴ *Around the Day*, however, is not an "unwritten novel"; to call it so presumes that it is a text that fell short of a desired standard, that Cortázar abstained from turning the text into a novel and, consequently, that a *written* novel is the measure of what a text could or should be — that a written novel is an *accomplished* novel. Another critic, Ana María Hernández de López, more fitly called them "kaleidoscopic books" (Hernández 1987: 194), a term that captures the playful sense of shifting coalescence of heterogeneous elements akin to the organizing principles of culture.

We have some idea of how Cortázar himself liked to think of these books. I mentioned above that some of the blurbs refer to them as

¹² Although *Around the Day* and *Last Round* are similar and sequential in many ways (there are, for example, hidden references in the latter to the former), they are dissimilar in other ways that lie outside the scope of this study. Therefore, and as far as possible, I have avoided clumping them together here, although in a certain sense they do belong in the same aesthetic and ideological category. I hope that this study will motivate further research on the links and differences between Cortázar's two almanacs.

¹³ One of the main arguments of Vargas Llosa's article is that, in the context of Cortázar's life, promiscuity, along with social concern and political commitment, signaled a turn for the worse.

¹⁴ Lemaitre quotes from Stephen Kock's "Flights of Polymath's Fancy": "The 20th Century" writes Kock "has witnessed the emergence of a potent — and I think possibly even new — literary form, which we might dub, informally, the unwritten novel. The unwritten novel is a book, however polished that seems a compilation of fragments. A typical example looks like a salad of autobiography, notebook ecstasies, diaristic confessions, prose poems, epigrams, meditations, shafts of critical discourse. Yet these scattered works are not mere pastiches. They do have unity; but theirs is the coherence of a unifying refusal, an energized denial" (Lemaitre 1988: 186).

collages, a term close to the cinematic *montage* and one that captures the idea of a seemingly random yet nonetheless calculated gathering of semantically distant and disparate parts. In interviews, Cortázar liked to refer to them as “almanacs”,¹⁵ a word derived from the Arabic that implies organization and system: each entry corresponding to a day, week, or month of the year. It is a rather ironic term because in most of the almanacs of the Hispanic world each saint is placed in its proper pigeonhole where it quietly stays until its next turn the year after — which is precisely the opposite of what Cortázar does in these books. Somewhere between these two terms, between the apparently casual yet nonetheless calculated juxtaposition of distant signifying worlds suggested by the notion of *collage*, and the ironic use of the word *almanac* to comment, with humor, on the accepted order of cultural entries, Cortázar sets forth a *sui generis* conception of the book.

Sui generis, because in contrast to most novels, essays, and stories, *Around the Day* does not follow a preconceived plan nor does it strive to achieve a compositional finality.¹⁶ *Around the Day* is not meant to be “definitive”. I mentioned that in subsequent editions, Cortázar feels free to alter both the graphic *dispositio* and the content of the first edition. Indeed, Cortázar’s first almanac comes close to his aspired aesthetic standard of the *jazz take*: the book is conceived as a kaleidoscopic series of pieces that are free to shift with each reading and to offer themselves at once as what they are and as what they can be as they interplay with other elements of the text. One of the most ostensible examples of this is “La hoguera donde arde una” (“The Fire That Burns A”). It is a “half-baked” poem composed of 51 “incomplete” lines, each of which is an instigation for the reader to complete it. Here are a few examples:

To bite in the act of love is not strange when you have
 I had moaned, yes, and at some point I was able to
 We didn’t speak about it after, he seemed proud of
 (Cortázar 1980: 83)¹⁷

¹⁵ Cf. Cortázar and Prego, 185.

¹⁶ I suspect Cortázar would not have wished his work to be encapsulated by this assertion. He would have argued, for instance, that his novel *Rayuela* (*Hopscotch*) was “not in any way a book of a writer who plans a novel, not even vaguely” (Prego, 108); but then again, we should keep in mind that he also claimed that his stories — some of which are among the most highly structured stories in Latin American literature — unfasted themselves like monkeys from trees or unexpectedly fell on his head like coconuts.

¹⁷ There is a similar poem in *Ultimo round*.

This is an open-ended and participatory conception of literature that models an often-overlooked aspect of culture. Culture, too, is conformed not of final discourses but rather of a series of signifying proposals that much like jazz *takes* either prolong or renew, or both prolong and renew, existing cultural codes. The pieces in *Around the Day* come together in a communal space that is open to the polyphonic voices of culture, a crossroads of mobile semiotic possibilities that ends up drawing a complex picture that is both uncertain and desirable, uncertain because at any given point it is partial and in flux, and desirable because at any given point it is an offer and proposal which we may take or leave. Culture, Cortázar reminds us, is not only the vehicle in which we ride but also the one we drive.

With the steering wheel in our hands, we may choose to repeat old trodden paths, but then the book does not allow us to forget the consequences of individual actions that have led to the ill fated history of the twentieth century and to so many posthumous lives of acquiescence (there to remind us, for example, are the chronicles and images of the atrocities of Viet Nam and of the abduction, maiming and enslavement, of children in Venezuela). Or, with vertigo, anticipation, and some imagination we may take the wheel in our hands and turn into the lane of Journeys and Surprises as naturally as one may turn the door knob and walk into that Kibbutz of Desire that Horacio Oliveira so longed for in *Rayuela* (*Hopscotch*), Cortázar's acclaimed 1963 novel. We may also take flight and visit the island of the cronopios; *Around the Day*, after all, is also the book where a highly grateful and expectant cronopio travels — by plane of course — to “a country of cronopios” (Cortázar 1967: 203).

The *cronopios*? They are these half-real, half-imaginary creatures, at once ideal and goofy, joyful and hapless, and probably the most internationally popular characters among the many that Cortázar conceived. Most importantly, they are arguably the single most significant cultural contribution of the many he made and one by which Cortázar would have liked to be remembered. In what follows I would like to make avail of these slippery critters to advance in a rather Cortazarian fashion the thesis that *Around the Day* is a book that, like one of those partial beings in the permeable aquarium that has paused in the frontier that separates *what is* from *what is not* and *what could be*, has remained at the outskirts of culture, that this is a book where the most welcome and unheard of could be born.

Around the Day, for all practical purposes, is where the first cronopio was born — anachronistically, of course, as any self-respecting cronopio would care to be born. Which is to say that this is the book that, quite some years later, would give popular diffusion to the text where the first cronopio was in fact born. And the first cronopio was Satchmo, Louis Armstrong, born as a cronopio in 1952 (incidentally, the year in which Cortázar arrived in Paris for a long and fruitful exile), properly born as a cronopio in a text titled “Louis enormísimo cronopio” (“Louis the Hugest of Cronopios”) first published in *Buenos Aires literaria*, a journal of limited diffusion. This is the text reprinted in the pages of *Around the Day* beside a photographic reproduction of old Satchmo sharing with us the enormous smile of the incessantly born anew. Before the republication of this text in *Around the Day*, many readers in the Spanish speaking world had not only already heard of the cronopios but had incorporated them into their daily vocabulary; few, however, knew that there was a first cronopio and that this first cronopio was a being as human as human beings can get.

The cronopios, those elusive and likeable beings, had made their multitudinous entrance and became cultural icons in 1962 after the publication of what Vargas Llosa, likely thinking of the Spanish adjective *travieso*, called “the most mischievous” of Cortázar’s books: *Historias de Cronopios y de Famas*,¹⁸ translated into English in 1969 as *Cronopios and Famas* by Cortázar’s friend, the poet Paul Blackburn.¹⁹ The cronopios did not come alone; *Cronopios and Famas* introduced two other character types, the *famas* and the *esperanzas*, the complements and counterparts of the cronopios. Cortázar was and remains a well-read author;²⁰ *Cronopios and Famas* has been reprinted in Spanish over thirty times, and *Around the Day* does not trail far behind. Many readers today, as they did in the sixties and seventies when they first encountered these indelible beings, will refer to someone they know, or even someone they see walking in the street as a

¹⁸ Cortázar wrote the text after attending a Louis Armstrong concert in the Champs Elysées on November 9, 1952. In the tradition of Macedonio Fernández, Cortázar distributed among his friends an early mimeographed version of his *Cronopios and Famas* before it was published as a book.

¹⁹ In one of the first pieces of *Last Round* (“Uno de tantos días en Saignon”) Blackburn arrives to Cortázar’s place in Saignon “with the tremendous decision” to stay ten days so that he may be able finish with Cortázar’s help the Anglo-American translation of *Cronopios and Famas*.

²⁰ This is true specially among European and Latin American readers but also in the US and many other cultures of the world into whose languages Cortázar’s work has also been translated.

cronopio, or a fama, or a esperanza, as the case may be. But who are these elusive critters that have managed to become part of the *repertoire* of Latin American culture?

I will try to describe them here in the double context of the dialectics between the center and periphery of culture and of the renewal and persistence of cultural repertoires. Let us begin with the famas. Their name is derived from the Spanish word for fame. The famas are subjected to the center of culture; they feel at home in the agreed and prevailing repertoires and stick to the most structured languages and the correct practices of culture. They are also the easiest to define characters of the triad: their image of the world is made according to the norms of the "correct", the rest does not exist. They are the diligent bearers of the sanctioned semiosis of culture.

The *esperanzas* are the indecisive beings; they mediate between the cronopios and the famas. Their name in Spanish indicates that they are hopes, perhaps a hope to achieve the status of a cronopio, but not quite. In the country of the cronopios, "the cronopios have pulled out the color chalks that they always take with them and have drawn and enormous, THAT'S IT, in the walls of the *famas*, and with smaller and more compassionate writing, MAKE UP YOUR MIND, in the walls of the *esperanzas*" (Cortázar 1980: 173). They are the undetermined and for the most part inconsequential beings of the triad.

The cronopios, on the other hand, are indeterminate but plausible and even necessary beings that effortlessly slip away from every pigeonhole that society and language tends to put them in. They are by nature peripheral beings; there is something childlike about them, an often impractical but delightful eccentricity that goes against the grain of our accepted ways of knowing and perceiving — they are the tender caricatures of the humans we could be if someone rescued us from all the seriousness and solemnity that characterizes a great deal of our waking lives. Like Louis Armstrong — and I am grateful for the luck to write about him in the year of his centenary — the cronopios corode, without wishing, or even knowing it, the established norms of culture; but like Louis, they too frequently end up being tenderly accepted (although the *famas* will do so with a delicate frown). They are the bearers of things that they ignore; their main contribution, for instance, has been, as I said, to expand the repertoire of Latin American culture, a feat which the cronopios would never think of, much less take credit for. I said that many of us today can spot a cronopio in our mist; many also secretly aspire to see the world like one. This is a

playful aspiration that rejects both the *rigor mortis* of intellectual stiffness and the snobbish hope to belong to the top echelons of culture, to be part of the fashionable elite or the noble intelligentsia.

In *Cronopios and Famas*, Cortázar made it simultaneously intuitively easy and rationally difficult to understand the cronopios (it seems that much more is said there about the famas and the esperanzas). It is in one of the last pieces of *Around the Day*, that Cortázar draws a fuller picture of these critters. In "Viaje a un país de cronopios" ("Journey to a Country of Cronopios") we have the exceptional fortune to witness what could happen in a plane full of cronopios. A cronopio, in my place, would now proceed to translate at least two full pages of that text and as a consequence would inevitably be flooded with letters from publishers notifying him in enigmatic lingo of copyright infringements. I will limit myself to paraphrase. As soon as the cronopios are seated in the plane that is to take them to the desired island of the cronopios, they are notified by the company that they have to go back down to the airport because there is a lay over of more than two hours. It is to be expected that the cronopios will run into a web of obstacles when they travel (cf. "Viajes" in *Historias* (Cortázar 1989: 123), and it is also "a well-known fact," and now I do allow myself to translate and quote at length,

that the cronopios don't worry about such things, because immediately they think that the company is going to serve them big-tall glasses of juices of different colors in the airport's bar, not to say that they will be able to keep on buying postcards and sending them to other cronopios, and not only does this happen but on top of it the company has them served a succulent dinner at eleven p.m. and the cronopios can thus accomplish one of the dreams of their life, which is to eat with one hand and write postcards with the other (Cortázar 1980: 177).

I will say no more about the cronopios, except to mention that they are not afraid of tigers (especially of those that threaten our enjoyment of life), and that they always surf, with a sense of wonder and great enthusiasm, outside the accepted norms of culture.

What is interesting in the context of our discussion is that much like the cronopios, *Around the Day*, the book that told us about their progenitor and their country, has also managed to surf for years somewhere between the center and the periphery of culture. Compared with *Cronopios and Famas*, a book commonly acknowledged to be at the heart of the canon of Cortázar's opus, or to *Hopscotch*, a book widely recognized as one of the two "classic" novels of 20th Century

Latin American literature (the other is *A Hundred Years of Solitude* by Colombian writer Gabriel García Márquez), critics do not quite know what to do with *Around the Day*. The rich and variegated corpus of Cortázar's stories and even *62 modelo para armar* (1968) (*62 Modeling Kit*), which is an extremely difficult to categorize narrative, have settled in considerably firmer critical ground. *Around the Day in Eighty Worlds*, however, remains a satellite whose orbit, both in the context of Cortázar's work and in that of Latin American literature and culture, critics have largely been unable to adequately chart.

How can this phenomenon be explained? I think one way to explain the elusiveness of this book is by observing its affinity with the operations of cultural intersemiosis. It is a rather paradoxical affinity. *Around the Day* models the operations of culture as seen from the outside, while at the same time it assiduously goes against the grain of accepted norms of culture as seen from the inside. Cortázar's first almanac situates itself at a metasystemic perspective that is both critical and creative. Much like culture, the book's rhetorical *dispositio* follows a principle whereby an array of semiotic spheres gather together around an aleatory riff of surprising and meaningful encounters. And much like those "hot spots" where cultural repertoires clash, interact, and find renewal, each reshuffling of the book's *takes* generates extraordinary codes that heighten the level of information of the system. *Around the Day in Eight Worlds* is a rare book that manages to simultaneously take a part in, reflect, and recreate the *game relationships* of cultural interplay.

One final analogy: like the cronopios, those slippery beings who know so much about the power of the merry and the unexpected and so very little about the seriousness of our endeavors, *Around the Day* is an exceptional kaleidoscopic book that I suspect will remain for long at play at the outskirts of culture.

References

- Barthes, Roland 1974. *La Antigua Retórica: Ayudamemoria*. Trans. Beatriz Dorriots. Buenos Aires: Tiempo Contemporáneo.
- Cortázar, Julio 1962. *Historias de Cronopios y de Famas*. Buenos Aires: Ediciones Minotauro.
- 1963. *Rayuela*. Buenos Aires: Sudamericana.
- 1967. *La Vuelta al Día en Ochenta Mundos*, First edition. Mexico and Buenos Aires, Siglo XXI Editores.

- 1968. *62/Modelo para Armar*. Buenos Aires: Sudamericana.
- 1969. *Ultimo Round*. Mexico, Siglo XXI (Printed and made in Italy).
- 1980. *La Vuelta al Día en Ochenta Mundos*. Madrid, Siglo XXI.
- 1986. *Ultimo Round*. Mexico, Siglo XXI.
- 1989. *Historias de Cronopios y de Famas*. Buenos Aires : Sudamericana.
- Cortázar, Julio and Ana María Barrenechea 1983. *Cuaderno de Bitácora de Rayuela*. (Preliminary study by Ana María Barrenechea). Buenos Aires: Sudamericana.
- Cortázar, Julio and Omar Prego 1985. *La Fascinación de Las Palabras: Conversaciones con Julio Cortázar*. Barcelona: Muchnik Editores.
- Esquivel, Laura 1989. *Como agua para chocolate*. New York, Anchor Books.
- Even-Zohar, Itamar 1999. *The making of repertoire, survival and success under heterogeneity*. (Paper presented to the 5th IASS International Congress, Dresden, 6–11 October 1999.) Available on-line: <http://www.tau.ac.il/~itamarez/papers/rep-success.htm>
- Hernández de López, Ana María 1987. Los ochenta mundos de la vuelta al día. In: Burgos, Fernando (ed.), *Los ochenta mundos de Cortázar: Ensayos*. Madrid: EDI-6, 191–98.
- Lemaitre, Monique J. 1988–1989. Julio Cortázar y la novela no escrita. *Explicación de textos literarios* 17 (1–2): 186–203.
- Lezama Lima, José 1972. Cortázar y el comienzo de la otra novela. In: Giacomán Helmy (ed.), *Homenaje a Julio Cortázar*. New York: Anaya, 13–29.
- Sanjinés, José 1993. (*TANGO*): a metaphor of collaborative art. *Point of Contact* 3 (3): 91–103.
- Stavans, Ilan 1996. Justice to Julio Cortázar. *Southwest Review* 81 (2): 287–310.
- Vargas Llosa, Mario 1997. The trumpet of Deya. *The Review of Contemporary Fiction* 17 (1): 25–34.
- Varricchio, Andrea 1988. El mundo visual en *La vuelta al día en ochenta mundos*. *Discurso literario* 6 (1): 63–70.
- Uspenski, B. A. et. al. 1998. Theses on the semiotic study of cultures. *Tartu Semiotics Library* 1: 33–60.

Книга на периферии культуры: первый альманах Кортасара

Понятие *интерсемиозиса* предполагает *игровые соотношения* между многими взаимодействующими знаковыми сферами культуры, но сам термин вполне может применяться и в изучении некоторых особых художественных текстов. Данное исследование имеет целью показать на примере одного из них, “Вокруг дня в восьмидесяти

мирах” Хулио Кортасара, как своеобразное взаимодействие семантических сфер текста одновременно моделирует и обновляет сложные культурные процессы производства значений. Эта часто переиздаваемая и трудноопределимая книга, долгое время оставшаяся на периферии латиноамериканской культуры, — идеальный пример для изучения динамической связи культурного центра и периферии, а также роли писателя в творческом обновлении *репертуаров* культуры. Перекидывая мост через промежуток, отделяющий семиотику культуры от семиотики художественного текста, данное исследование по своему духу является попыткой приблизиться к критическому творчеству выдающегося покойного теоретика Юрия Лотмана.

Raamatud kultuuri perifeerias: esimene Cortázari almanahh

Intersemioosise mõiste eeldab mängulisi seoseid paljude teineteist mõjutavate märgiliste kultuurisfääride vahel, kuid terminit ennast võib kasutada ka mõningate eripäraste kunstitekstide uurimisel. Antud uurimuse eesmärgiks on näidata ühe taolise teksti, Julio Cortázari “Ümber päeva kaheksakümnes maailmas” näitel kuidas teksti semantiliste sfääride omapärane koosmõju üheaegselt nii modelleerib kui ka uuendab tähendusloome keerulisi kultuurilisi protsesse. See mitmes trükis ilmunud raskestilahterdatav raamat jäi tükiks ajaks ladinaameerika kultuuri perifeeriasse ja on ideaalseks näiteks kultuurilise keskme ja perifeeria dünaamilise seose uurimisel, aga samuti kirjaniku rolli määratlemisel kultuuri repertuaaride loominguulises uuendamises. Olles sillaks kultuurisemiootika ja taideteksti semiootika vahel, püüab antud uurimus läheneda silmapaistva teoreetiku Juri Lotmani kriitiliste tööde vaimule.

On the concept of humanistic base texts

Linnart Mäll

P.O. Box 414, 50002 Tartu, Estonia

e-mail: ero@hot.ee

Abstract. I elaborated the concept of humanistic base texts when I was translating Indian and Chinese classical texts into Estonian. At present, I would classify as such the following works: “Bhagavadgītā”, a part of Buddhist texts, “Lunyu” by Confucius and the Gospels according to Luke, Matthew and Mark, to mention only a few. This article gives a general survey of the concept, to be specified in the papers to follow.

The shifts in social life that occur with the passing of time, or history, can be described and explicated from various angles. First and foremost, the choice of the latter depends on which phenomena and tendencies the describer or explicator considers as decisive or, even, motive powers. Thus, for example, changes in production and exchange or, in other words, in economic life, have been regarded as such, or else the events within or between countries (for instance, in diplomacy or battlefields), which is to say, in politics. Likewise, the alterations, renewals and decay of mythological, religious, philosophical, artistic and ideological ideas, or changes in the spiritual world, have also been held responsible, as have, indeed, many other things. The present author regards humanistic base texts as the greatest influencing factor in the history of the last couple of millennia.

Despite their major impact, the number of humanistic base texts is not really large. They were created, or they appeared or took shape (the use of several words above refers to the complex nature of the formation process of the texts; from now on, only one of those will be used, ‘to take shape’) in various parts of the Old World in a definite period of time. This is characterized by the distinct formation of the

new social dimension which had started to evolve much earlier, but was left unrecognized for a long time, denoted by different words in different places back then, but which can at present be termed, in the most general sense, as culture.

It must have become obvious at that period that mankind was more than just a part of the surrounding nature, and that the human being more than merely a member of the tribe or people or polis or state, and the transmitter of its traditions and mythological and religious beliefs. The burden of the personal existence must have struck one for the first time at approximately the same time, which found expression in the questions addressed to oneself and other people: "How to be?", "Why to be?", "What to do?", "How to improve or change myself or, how to become different or new?" All these questions presuppose an awareness of the sense of duty and responsibility, and I would like to add at this point that the so-called existential questions in the manner of "To be or not to be?" were probably not popular back then.

Although in the absolute time scale this period and, as a result, the formation of humanistic texts do not exactly coincide by regions, one could still maintain as a generalization that it took place between the 6th century BC and the 2nd century AD, while some of the texts have taken their final shape even later.

We shall now attempt to sum up the meaning of this notion. The word 'base text' refers, logically enough, to the text that has been a basis for other texts; thus we have a text here that over the ages has functioned as a text generator. A genuine base text has the ability to give rise to an indefinite number of new texts in an indefinite period of time which do not have to be put down in writing but may, as indeed they mostly do, exist either in the form of oral speech or discussion or even as a speculative act (deliberation, reflection, contemplation, meditation).

A humanistic base text has a specific tendency, expressed by the word 'humanistic'. In English, the semantic range of this word has been conveyed by mainly two equivalents: 'humane' and 'human', in the sense of being 'characteristic of man'. The semantic range of these both, as is generally known, is rather vague. Thus, to be more specific, a 'humanistic base text' is a base text that on the one hand is characterized by elevating man as such (in other words, as a species and an individual) to the central and determining phenomenon of existence, on the other hand, by an emphasis on such 'humane' qualities as dig-

nity, philanthropy, compassion, non-violence, responsibility, sense of duty, respect, etc. in human relations.

Although each humanistic base text has evolved within the context of a definite culture, reflecting the latter's influence both in its form and content to such an extent that at first glance it may seem difficult, if not entirely impossible, to find a common denominator for them, there are still enough similarities and common features that allow us to do so, relating to both the formation process and structure of the texts (A) and the doctrines they contain (B), as well as the direct and indirect impact they make (C). We shall now present the most essential ones:

A1. Humanistic base texts evolved in a relatively developed cultural environment, characterized by the existence of the art of writing and a generally accepted and, in some cases, the sole religious and mythological thought system, as well as by an aspiration to establish, in one form or the other, a social hierarchy. At the same time, we can detect a tendency to reinterpret the existing and to present new ideas and doctrines.

A2. These texts have nominal authors, referred to by the same texts and the tradition based on them.

A3. These texts present a definite Teaching. This Teaching has been given through the mouth of a definite Teacher, who has a definite mission to preach it. The texts describe, to a greater or lesser extent, the life story of the Teacher.

A4. Although the Teachers must have certainly been literate, due to their origin and education, they preached their Teachings by word of mouth, so that those became fixed in writing only later by their immediate disciples or the inheritors of the teaching tradition. Because the editing process of the texts continued also after that, they acquired their final finished (canonical) form later still.

A5. Despite all this, a certain authorial idiosyncrasy can be detected in all humanistic texts, embracing both descriptions and the way the Teaching is presented. This and other characteristic features of the humanistic base texts have now and again given rise to opinions that the actual proponents of the Teaching are the nominal authors, or the latter are entirely unknown, and that the Teacher is altogether a fiction or a generalized literary figure.

A6. The Teacher is depicted as an unusual person in some way, to whom extraordinary, supernatural and downright divine qualities are ascribed.

A7. Yet also the human features and even weaknesses of the Teachers have been emphasized in the humanistic base texts. They all feel sad at times when they are not understood and they often doubt the expediency of their mission. They do not consider themselves to be unique and superior to other people. Instead, they think and expect that the others should follow them and become like them. This is particularly true of their relations with their disciples, among whom there are always some that are convinced that they surpass the Teacher so much that it gives them even the right to betray.

B1. The Teaching presented by any humanistic base text is formally, content-wise and also terminologically related to a certain cultural environment, within which it evolved. According to the Teachers themselves, their doctrines are not entirely original, having been preached in one form or other earlier as well.

B2. Yet the novelty of the message of all humanistic texts was quite literally revolutionary, and not just because the Teachings that were proclaimed differed radically from the existing ones, but also partly due to the fact that the situation was right for their emergence.

B3. As pointed out earlier on, the most significant aspect of these Teachings is their humanism — their humanity and humanness. The main objective of humanistic teachings is to show to man the sense of his existence and what his possibilities and duties are, not only in the physical world, but also in the social and cultural situation at the given moment at the given place; to make the man understand that he as a member of mankind and as a definite personality (but not as *ego*) is something unique in the world, which is why he can and even must, bearing full responsibility, act in a novel way.

B4. The uniqueness of man as a member of mankind is manifested in that gods and other supernatural creatures and phenomena are no longer unequivocally placed above man, but that they are considered equal to him in many ways and sometimes even lower. A god may acquire human shape, appear as a human being, and man may become a god.

B5. The uniqueness of man as a personality is manifested above all in the emphasis of the fact that it is him as a definite person that has been chosen to carry out the Teaching.

B6. This also means that man as an individual has an opportunity to improve himself, to change himself, to become new. Man is not destined to remain the same or to retain his former self. Instead, he has

the freedom to choose between remaining the same and becoming new, as well as the freedom of choosing between the various possibilities and means or ways of becoming new.

B7. In all humanistic base texts, the emphasis has been laid on describing the path or the process of man's renewal. The explication of the path has been preceded by the analysis of the initial situation, that the man inevitably has to proceed from, as well as the more or less exact formulation of where the man will end up.

B8. Principally everybody can renew himself, and it does not depend on one's origin or status in the social hierarchy, but above all on how the Teaching or, to put it differently — a new cultural paradigm — has been adopted.

B9. This means that man is culture-centered from the point of view of humanistic base texts: not only does he depend on the current state of culture and recreate the culture, but he also possesses an ability to create and bring to culture utterly new phenomena, and even a completely new cultural whole, something that the Teachers themselves have quite unequivocally accomplished.

B10. At the same time man has to understand that he himself is not the creator of culture, for the process of creation only takes place through him, that is, it is the culture that functions through him. The man must understand that the *ego* that thinks that it has its own thoughts and performs its own acts does not, in fact, exist, so that it has either to be done away with or at least subjected to something that in the given culture is regarded as greater or higher.

B11. The reason for the emergence of *ego* is the self-protective endeavour of the individual, caused by the fact that man originates from nature, or, in other words, from the animal world. The humanistic base texts accept this fact to a greater or lesser extent, while implying at the same time that the focus of human existence should be located somewhere else, on a cultural level, which also means that the natural nature should be replaced by the cultural one.

B12. It follows from the above that the relations based on physical descent (i.e. genetic information) should not be as important as the culturally determined relations (i.e. cultural information).

B13. This in turn allows us to say that the transmission of cultural information is more important than that of the genetic information. All humanistic base texts view the Teacher-disciple relationship as more significant than the parent-child or kinship relations. Studying and

passing on the teaching are considered more valuable than procreation and taking care of physical children.

B14. At the same time, the humanistic base texts stress the need for the man to remain humane, meaning that he must treat if not everything that is alive, then at least human beings, with compassion and love.

B15. Compassion and love are notions that have many meanings and that can and may be interpreted rather deliberately. One needs sense to grasp their truly humane significance and to know and employ them as such. Common sense, consciousness, comprehension, understanding (i.e. intellectuality) — these are among the most essential concepts in humanistic base texts, the development of intellectual capacities being one of the principal means, as well as objectives, in the process of human renewal (or attaining the higher state of consciousness or repentance).

B16. To sum it all up — the process of becoming a new man or humanization actually means becoming a cultural man. The ideal, however, is not one-sided (specialized) culturalization but a total cultural immersion or absolute culturalization that from the point of view of humanistic base texts means that the natural animalistic or brutal human being has become a superman, saint, blessed, elevated, perfect, Buddha, bodhisattva, son of God, god etc. — the name depends on the specific character of the vocabulary of a definite cultural tradition.

C1. The dialogue between the base texts and background cultural environment began already at the first stage of their formation, at the time when the Teacher himself pronounced his Teachings either as sermons or instructions meant for one or another concrete person. Their impact was quite slight at first, becoming manifest mainly in the relatively limited circle of disciples. But their radical difference from the dominant or generally accepted ideology inevitably led to conflicts, which were often accompanied with severe repressions.

C2. As time passed, their impact gradually increased, reaching a truly explosive effect after the formation of canonical texts.

C3. Although one cannot detect the direct tendency in the humanistic base texts themselves, several religious, philosophical and other doctrines were formed on the basis of those, as well as certain institutions that often claimed the exclusive rights of interpreting these texts. In case such institutions managed to attain the dominating position in the society, the humanistic essence of the Teachings has been consid-

erably reduced in the accepted interpretations at the expense of the dominant background system either in the period of the formation of the text or the emergence of the given interpretation.

C4. At the same time we should not underestimate the role of these institutions in spreading both the humanistic base texts, as well as the humanistic ideas, due to which their impact has reached global dimensions by today.

C5. By way of conclusion, let us maintain that even though in the course of history downright human-hating and ego-cult based teachings have been preached under the name of humanism, the direct and indirect impact of humanistic base texts has still been of cardinal importance in the ever-growing influence of humanistic ideas on the development of human society.

О концепции базовых гуманистических текстов

С точки зрения данной концепции, базовые гуманистические тексты оказали определяющее влияние на ход истории последних двух тысячелетий. Эти не столь многочисленные тексты сложились в разных регионах Древнего мира (в Китае, Индии, на Ближнем Востоке) в определенный исторический период, который можно, несколько обобщая, ограничить промежутком от –IV до +II вв.

Понятие “базовый текст” означает текст-генератор, который способен служить основой все новых текстов. У гуманистических базовых текстов особая направленность, выраженная словом “гуманистический”. Их характеризует, с одной стороны, возвышение человека как такового (вида и отдельной личности) в качестве главного и определяющего явления бытия, с другой стороны, подчеркивание таких “человеческих” качеств как достоинство, любовь к человеку, сострадание, отказ от насилия, чувство ответственности и долга, почтительность и т.д.

Хотя любой гуманистический текст сформировался в контексте своей культуры, влияние которой отразилось в особенностях его содержания и формы, эти тексты достаточно сходны и имеют много общих черт. Эти сходства затрагивают в основном три аспекта: (А) процесс формирования и строение текстов, (Б) изложенные в них учения, (В) их непосредственное и опосредованное влияние.

(А) Все эти тексты излагают определенное Учение и исходят от определенного Учителя. Учителя проповедовали свое учение устно, оно было записано учениками и последователями и, наконец, в

длительном процессе редактирования приобрело каноническую форму.

(Б) Учение каждого гуманистического базового текста связано по форме, содержанию и терминологии с определенной культурной средой, в которой он сложился. В то же время человек, с точки зрения базовых гуманистических текстов не только зависит от состояния культуры в данный момент и не является лишь воспроизводителем культуры, а прежде всего ее создателем. Цель базовых гуманистических текстов — показать человеку смысл его существования и его возможности и задачи не только в физическом мире, но и в сложившейся в данное время и в данном месте общественной и культурной ситуации; объяснить человеку, что он, как представитель человеческого рода и конкретная личность (но не *эго*), неповторим и поэтому может и должен действовать с полной ответственностью.

(В) В диалоге базовых гуманистических текстов с фоновым культурным окружением их влияние в обществе начало расти, особенно после того, как сформировались канонические тексты. На их основе возникли религиозные, философские и другие учения, но и институты, которые часто пытались присвоить себе монопольное право интерпретации этих текстов. Эти институты, тем не менее, способствовали распространению самих текстов и гуманистических идей, благодаря чему влияние этих текстов теперь стало глобальным.

Humanistlike baastekstide kontseptsioonist

Selle kontseptsiooni kohaselt on humanistlikud baastekstid olnud viimase paari aastatuhande jooksul ajalookulu suurimateks mõjutajateks. Need tekstid, mida ei ole kuigi palju, kujunesid Vana Maailma mitmes piirkonnas (Hiinas, Indias, Lähis-Idas) kindlal ajalooperioodil, mida võib mõningase üldistusena piiritleda –IV ja +II sajandiga.

Mõiste 'baastekst' tähendab teksti, mis tekstigeneraatorina on olnud aluseks üha uutele tekstidele. Humanistlikel baastekstidel on eriline suunitlus, mida väljendab sõna 'humanistlik'. Neid iseloomustab ühelt poolt inimese kui niisuguse (liigi ja üksikisiku) ülendamine olemasolu keskseks ja määravaks nähtuseks, teiselt poolt aga niisuguste "inimlike" omaduste rõhutamine, nagu väarikus, inimarmastus, kaastunne, vägivallatus, vastustunne, kohusetunne, aupaklikkus jne.

Kuigi iga humanistlik baastekst on kujunenud oma kultuuri kontekstis, mille mõju on avaldunud nii sisu kui ka vormi eripäradena, on kõigis neis sarnasusi ja ühiseid jooni piisavalt palju. Need puudutavad peamiselt kolme valdkonda: (A) tekstide kujunemisprotsessi ja ülesehitust, (B) nendes esitatud õpetusi ning (C) nende vahetut ja kaudset mõju.

(A) Kõik need tekstid esitavad kindlat Õpetust ja lähtuvad kindlalt Õpetajalt. Õpetajad kuulutasid oma õpetust suuliselt, see pandi kirja tema õpilaste ja järeltulijate poolt ning võttis pikas redigeerimisprotsessis lõpuks kanoonilise kuju.

(B) Iga humanistliku baasteksti õpetus on vormilt, sisult ja ka terminoloogiliselt seotud kindla kultuurikeskkonnaga, mille raames see kujunes. Samas on inimene humanistlike baastekstide seisukohalt kultuurikeskne olend, kes mitte ainult ei sõltu kultuuri hetkeseisust ega ole kultuuri taastootja, vaid ka kultuuri looja. Humanistlike baastekstide eesmärgiks on näidata inimesele tema olemasolu mõtet ja seda, mis on tema võimalused ja ülesanded mitte üksnes füüsilises maailmas, vaid ka antud hetkel antud kohas valitsevas ühiskonna- ja kultuurisituatsioonis; teha inimesele selgeks, et tema kui inimsoo liige ja konkreetne isiksus (kuid mitte *ego*) on maailmas midagi erakordset, mille tõttu ta saab ja peab täie vastutustundega toimima.

(C) Humanistlike baastekstide dialoogis taustkultuurikeskkonnaga hakkas nende mõju ühiskonnas pikkamööda suurenema, eriti peale kanooniliste tekstide väljakujunemist. Nende põhjal tekkis religioosseid, filosoofilisi ja muid õpetusi, aga ka institutsioone, mis sageli püüdsid endale omistada tekstide interpreteerimise ainuõigust. Eeskätt just need institutsioonid on aga aidanud kaasa tekstide endi ja humanistlike ideede levikule, tänu millele nende mõju on nüüdseks saavutanud globaalse ulatuse.

Semiotic pollution: Deliberations towards an ecology of signs

Roland Posner

Technical University Berlin,
Ernst-Reuter-Platz 7, D-10587 Berlin, Germany
e-mail: posn0135@mailszrz.zrz.tu-berlin.de

Abstract. This article compares the material pollution of life's elementary resources, i.e., water, soil, and air, with the semiotic pollution of the elementary resources of sign-processes, i.e., channel, sign-matter, and message; code, signifier, and signified; as well as context, sender, and recipient. It is claimed that semiotic pollution interferes with sign-processes as much as material pollution interferes with the fundamental processes of life; both types of pollution are similar in that they produce stress for human beings in current societies. It is argued that semiotics is able to provide the conceptual tools necessary to develop policies that can reduce semiotic pollution. As is shown, however, additional research is required to operationalize and metricize generalized concepts of semiotic pollution such as "channel-related", "semiosis-related", and "situation-related noise".

Since the 1960s, there has been much talk about the ever increasing constraints that environmental pollution places on our quality of life. In recent decades, ecology has worked hard to explicate the notion of pollution scientifically and to render objectively measurable the degree to which a biotope is polluted (Weizsäcker 1989). This article attempts to show that this concept of pollution is insufficient to explain important causes of the constraints placed on our quality of life. The common idea of material pollution, therefore, is to be augmented by the concept of semiotic pollution. In this article, a suggestion for the explication of this concept is developed and possible means of

objectively measuring the degree of semiotic pollution are considered. Given the current status of research, the goal of this paper is not to present a fully elaborated theory of semiotic pollution, but rather to open the discussion of the possibilities and limits of such a theory. In providing this discussion with the necessary concepts, semiotics accepts social responsibility for its objects of research.

1. Material pollution

Today, those who speak of pollution mean

- the poisoning of rivers, lakes, and seas with industrial waste and fertilizers (Dorst 1998),
- the contamination of the soil with heavy metals and pesticides (Lagadec 1987; Reiser and Martzloff 1988), and
- the smogging of the air with industrial and automotive emissions (Koch 1983; Wolf 1988).

Citizens of industrialized countries are subject to a considerable amount of stress due to these developments since they place constraints on their activities (Selye 1976; Jerusalem 1990). One personally experiences the reduction of the quality of life, when one can no longer

- drink tap water for fear of stomach problems,
- swim in a river, lake, or sea for fear of exposure to contagious diseases,
- eat the fruit and vegetables from one's own garden for fear of ingesting high doses of heavy metals,
- stay out in the sun for extended periods of time for fear of getting skin cancer due to overly powerful ultraviolet rays,
- breathe fresh air for fear of heart problems due to the high ozone content.

Stress, however, is also caused when one leaves the house and cannot

- go anywhere without running into fences and traffic signs,
- avoid seeing billboards and signs wherever one looks,
- read the advertisement texts because there are too many of them,
- recognize the faces of people in traffic because their eyes are hidden behind helmets and sunglasses,
- understand what someone is saying because the traffic noise drowns them out,

- smell the rejuvenating aroma of the trees lining the streets because it is masked by the exhaust from the air conditioners;
- taste the natural aroma of a meal because the ingredients are grown in a greenhouse, neutralized with conservatives, and treated with aroma enhancers (Posner 1998).

For the past generation, environmentalists have called attention to the worldwide deterioration of living conditions. Their campaign has made clear that this development was caused by exactly those measures which were originally taken to improve the standard of living in industrialized countries (Carson 1962, and others).

Environmentalists consider the worst sort of pollution to be the contamination of life's fundamental resources: water, soil, and air (Reiser, Martzlof 1988). This pollution becomes threatening when it disturbs basic life-sustaining processes such as eating, drinking, and breathing.

In general, pollution does not become evident until it is almost too late to repair the damage: it is too late when people taste it in the water, when they see the withered plants in the field, when they have to hold a cloth to their nose because of the stench in the air (Kur 1986). Even if possible, it could take decades or centuries to rid the ground water of chemical substances, to clean the salty, pesticide-contaminated, acidic, or over-radiated soil, and to remove poisonous gases from the air.

The contamination of these resources has occurred insidiously (Böhret 1990). People initially react to the gradual deterioration of their living conditions with subconscious adaptation. When the situation eventually becomes unbearable, they are forced to evacuate the region with poisoned ground water, contaminated soil, and smoggy air.

In the conventional sense, therefore, pollution is a physical deterioration of life's elementary resources through contamination. Pollution is considered a threat because

- it endangers the basic life-sustaining processes of human beings and other higher life-forms,
- it occurs insidiously and is not detected until it is nearly too late to repair the damage,
- exactly those production and consumption processes originally intended to make life easier, paradoxically, wind up making people's lives more difficult.

2. Semiotic pollution

The explosive combination of the threatening factors presented above no longer affects only the basic life-sustaining processes such as eating, drinking, and breathing. Today, it also affects the more advanced needs which people satisfy in interaction with each other. Citizens of highly developed countries become frustrated when

- they look in their mailbox in the morning and find that their important mail gets lost in a flood of advertisements,
- sitting down at their computer, they find hundreds of unsolicited e-mails waiting to be answered before they can begin their work,
- they are forced to call an agency or administrative office and the phone is continuously either busy or unattended or the answering machine is turned on,
- they want to take action and constantly have to consult a lawyer about legal obstructions and risks,
- they want to apply for a job and are obligated to fill out a questionnaire with dozens of irrelevant questions,
- they are forced to sign a contract of purchase and have to read many pages of small print referring to situations which do not apply to themselves,
- they are prescribed medication and the information in the package is not only difficult to understand but also makes note of innumerable non-applicable uses, risks, and side-effects.

In our society, almost all innovations introduced to make life easier end up achieving exactly the opposite; they make our lives more complicated and more difficult. Just as disturbing as the hindrance of fundamental life-processes caused by material pollution is the hindrance of the fundamental sign-processes caused by the pollution of our semiotic resources. It seems justifiable, therefore, to speak of semiotic pollution as being analogous to the material environmental pollution.

Similar to material pollution, semiotic pollution is considered threatening because

- it endangers the fundamentals of human interaction in industrialized countries,
- it occurs insidiously and is not detected until it is nearly too late to repair the damage, and
- exactly those semiotic processes originally intended to facilitate human interaction, paradoxically, wind up hindering it.

These are far-reaching claims. In the following sections, these claims are first systematized to render them debatable and then are substantiated with reference to examples. The structure of sign-processes and their associated cultural techniques serve here as a guide. The considerations lead to conclusions for the theoretical and empirical research that is necessary for an ecology of signs (Nöth 1996). This, in turn, will make a well-focused semiotic environmental protection policy possible.

3. Factors of semiosis as semiotic resources and the pollution of these resources

A complex interpersonal sign-process (semiosis) begins with a sender who, in a given context, communicates a message to an addressee. This is done by using an appropriate channel and by selecting from a common code a signified befitting the message. The signified is connected by means of the code to a signifier that is realized by producing appropriately formed sign-matter. If all of this occurs as the sender intended, the addressee perceives the sign-matter through the channel and recognizes it as a signifier which, due to the code, refers to a signified. Given the signified and the context of transmission, the addressee then reconstructs the message (Posner 1989: 245). In general, the processes involved take place sequentially or, to some extent, simultaneously: the message to be sent must be known in order to select an appropriate signified; the signified must be known in order to identify a signifier; the signifier must be known in order to produce the sign-matter. Thus, the formulation process requires the transformation of a message into a signified, a signified into a signifier, and a signifier into sign-matter. The reception process occurs in the opposite order. It requires the transformation of sign-matter into a signifier, a signifier into a signified, and a signified into the message, which, if there were no disturbances, is the same as the message intended by the sender. The transformations are of quite different types. The sender's transforming the message into a signified and the recipient's transforming the signified into the message are both context-dependent pragmatic processes of abduction (Wirth 1995). The same holds true for the sender's production of sign-matter when realizing the signifier as well as the recipient's reconstruction of the signified from this sign-matter. In contrast, relating the signifier to the signified, as the sender

does (encoding), and relating the signified to the signifier, as the recipient does (decoding), are semantic processes of deduction (Prieto 1972: 23).

As this outline shows, each sign-process can be described by characterizing the factors involved: sender, recipient, context, channel, sign-matter, message, and code with its signifiers and signifieds. In comparing material and semiotic pollution, it makes sense to regard these factors as resources of the sign-process.

Each of these resources can be polluted (cf. Prieto 1972: 50–58 and 1975: 49–60 on success and failure of communication acts):

- Excessive noise-levels (see section 5 below) in the **channel** prevent the recipient from recognizing the sign-matter produced by the chosen sender. This obviates all further sub-processes.
- Even if the noise does not reach this point, it can pollute the **sign-matter** to the extent that it loses its conciseness. In the case of codeless semiosis (Posner 1997: 234), this hinders the recipient in ascertaining the message. In the case of coded semiosis, the recognition of the signifier is hampered and with this, all further sub-processes up to the ascertaining of the message must fail.
- The **signifier** can also become polluted. In such a case, its form cannot be distinguished from other signifiers of the same or of a different code.
- A polluted **signified** has no clearly defined relationship to the other signifieds of the code and is, therefore, poorly suited for the reconstruction of meaningful messages.
- A **message** is polluted, when it does not easily correspond to signifieds or apply to the semiosis-partner's context.
- The **code** is polluted either when its signifiers (syntactic space) or its signifieds (semantic space) are polluted or when the correlation between the syntactic and semantic spaces is muddled (Prieto 1972: 45 and 1975: 27 speaks of "sematic" and "noetic fields"). The latter case exists when there are too many signifiers with more than one signified (homonyms) in the code.
- The **context** is polluted, when the semiosis-partners either take very different situations into consideration or structure their shared situation differently in translating between the message and the signified (or between the message and the sign-matter in the case of codeless semiosis). It is often unclear to the semiosis-partners which circumstances should be considered as part of the formulation and reception contexts. As a result, the sender does not know

which signified s/he should select for the message and the recipient does not know which message s/he should derive from the signified.

- Even the **sender** and the **recipient** can be polluted. This is the case when they are unable to use the necessary channel or code or to assume the correct context.

As with material resources, the pollution of semiotic resources can, to a certain degree, be compensated by switching over to other resources of the same or different type:

- Surrounded by a din, one switches from the auditory channel to the visual channel to produce gestures rather than to speak.
- When there is a high level of noise, one articulates the sign-matter very carefully so that the signifiers are recognized despite the noise.
- When a signifier is easily misunderstood, one increases the number of signifiers so that they provide additional clues for the decoding process.
- When the signified is unclear, one draws the recipient's attention to a clarifying context.
- When the usual code is muddled in the intended semantic field, e.g., because the usual code was never used in handling the given topic, one switches to a different code.
- When it is probable that the sender and the recipient assess the context of the sign-process differently, then one chooses expressions that can be interpreted independent of the context, i.e., one formulates more explicitly and thereby increases the number of communicated signifieds.
- When one considers the semiosis-partner to be less capable of semiosis, then one lets the situation speak for itself.

4. Two examples of channel pollution: light and sound

The analogy between material and semiotic pollution can easily be elaborated in detail for the sign-channels. This is facilitated by the fact that material resources such as air and water are often used as sign-channels themselves.

A channel serves to transmit the sign-matter; were the channel itself to become sign-matter, the sign-process would fail. The same

holds true for material resources; they usually go unnoticed as long as they allow life-processes to take place without a problem. In general, air is odourless, water is tasteless, and both are colourless; that is, unless they contain foreign particles. It is not until the contamination reaches a certain level that the air "smells", the water "tastes of something", and both look "dirty". The air and water pollution can increase to the extent that it disrupts the visual, olfactory, and gustatory perception of other objects. This is the case with smog and auto-exhaust in the air and with oil and chemicals in the water. The strain on the material resources, therefore, has a negative effect on those sign-processes that use these resources as channels. Not only a few but rather all sign-processes which depend on the polluted channel are disturbed.

In modern industrial societies, smog disturbs the visual channel, industrial noise disturbs the auditory channel, and auto-emissions disturb the olfactory channel. The smog, noise, and stench are caused, respectively, by the carbon-dioxide emission of heating systems, the sounds of mechanical production processes, and the exhaust systems of automobiles. All three are examples of materially induced (material and) semiotic pollution. However, the opposite case is also possible: a channel can become semiotically strained resulting in material pollution. Examples of semiotically induced material (and semiotic) pollution are certain types of pollution through light (Schmauks 1997) and through sound (Honkasalo 1996).

The history of natural and artificial light is proof of how technology, in attempting to get rid of a deficiency, winds up helping to produce an overabundance that reaches damaging proportions. For a long time, people's spatial and temporal range of activity was limited because most of their actions could only be carried out in daylight. The art of making and maintaining fire then made nighttime and closed spaces as accessible to sign-processes as was daytime. For thousands of years, however, fire-based light sources, such as wood chips, candles, and oil-lamps, remained so expensive that the majority of people continued going to bed as soon as it got dark. It was not until the end of the nineteenth century that relatively inexpensive electricity made it possible in much of the world to disengage every-day activities from daylight. In all industrial countries today, the cities are lit all night and the basements are supplied with electrical light; visual sign-processes no longer have spatial and temporal constraints. These have been replaced, however, by semiotic constraints.

The introduction of electric light to enhance visual perception increased the energy consumption. This necessitated the construction of coal and oil power plants, and they, in turn, polluted the air, thus affecting the visual channel. More important, however, the excessive use of light itself has become a problem. Light, which is otherwise needed to see particular objects, becomes visible as such at night and is then often considered a disturbance. Dispersed light disturbs astronomers in their work since almost no stars are visible near large cities. Flocks of migrant birds lose their orientation when in the vicinity of a lit up city. Insects are attracted to luminous sources; if they are not singed by the heat of the lights, they are at least distracted from searching for food and partners. The price of people's increased freedom of motion due to light is, paradoxically, an impoverishment of their visual perception. In the cities, many children grow up without having ever seen a clear starlit sky and the only time many adults have seen the Milky Way is in a planetarium.

The excessive use of electric light not only makes visual sign-processes possible but it also hinders them (light pollution). In the same way, a high concentration of auditory sign-processes can produce the opposite of the intended effect (sound pollution). When walking through a Tunisian village at night, one is annoyed by the incessant barking of dogs. Many people own dogs to warn them of burglars; the dogs are intended to increase security. This, however, becomes impossible as the number of dogs grows larger; there is always a dog barking somewhere and the reason cannot be that burglars are constantly appearing. The continuous barking not only disrupts other auditory sign-processes but also interferes with its own purpose: a constant warning signal is not taken seriously as such.

In this case, one can speak of semiotically induced sound pollution. Based on the sign-behaviour of the dogs, it not only causes a locally restricted disruption of individual sign-processes but produces a constant disturbance of the auditory channel. One cannot escape this disturbance without leaving the country (or at least the affected neighbourhood). This disturbance developed progressively as the canine population grew. Having reached the present level, it can hardly be reduced without really giving burglars the feeling that they can become more active.

The same holds true for traffic noise in Indian metropolitan areas. There are many types of signals to help people orient themselves in traffic: the pedestrian's whistle, the bicycle's bell, the moped's and

motorcycle's hand-operated horn, the car's and truck's far reaching electric horns, and sometimes even the locomotive's steam whistle. These signals may be distinguishable to the motorists, but to the residents they contribute to a constant din that prevents them from hearing themselves speak. As with the barking dogs in the Tunisian village, this initially successful form of semiosis has become impossible due to its constant rather than intermittent occurrence. Individually, each of these signals can function as a warning signal. When produced simultaneously, however, their mutual disruption causes them to fail as warning signals; and this in turn, produces a great amount of stress. Here too, the current situation developed gradually and is apparently difficult to change without causing the traffic system to collapse. The only way to escape the noise permanently is to leave the city.

The traffic noise caused by the many warning signals is also semiotically induced pollution. This assessment is supported by the noted effect that the traffic noise has on municipal property value. The real estate market reacts to the reduced quality of living by decreasing the property value. Its reactions to material pollution (e.g., oil in the ground water) and to semiotic pollution (e.g., warning signals in traffic) are the same. As with material pollution, semiotic pollution is the worst in the areas where the poorest people live.

The same situation exists in large European cities. Here, however, remedial measures have been taken. Since the 1970s, if the laws enacted to limit acoustic signals are insufficient to reduce the level of traffic noise, then noise barriers are built. While solving one problem, however, this measure produces another: noise barriers are also visual barriers (Rohrman 1984: 198). In addition to having been robbed of their former peace and quiet, the affected residents are also robbed of their former view of the surrounding area. The relief of the auditory channel results in a disruption in the visual channel. Those who seek visual diversity in spite of this are forced to turn to the "new media" in their own homes: television and video. In this manner, one environmentally disruptive measure leads to another and there is no end in sight to the medial arms race (Bouissac 1993).

Environmental protection measures of this type are also to be found in the other channels. The initially hailed shift in suburban traffic from air-polluting buses to streetcars or trolley busses necessitated the construction of overhead contact lines. The tourists who use the traffic system to see historical buildings and monuments, however, feel cheated because the chaos of the overhead contact lines impairs

the view of the monuments and destroys their historical context. In this case, the shift is from olfactory channel pollution to visual channel pollution with additional destruction of the sign context. Remedial measures, such as installing mirrors to defer the view from the chaos of wires, are no solution since these only help photographers and simply increase the number of disruptive artifacts.

Such practices are ridiculous. They make about as much sense as installing a refrigerator in an Eskimo's home in order to neutralize the negative effect that the recently introduced central heating system had on food preservation.

These examples show that the visual, auditory, and olfactory (as well as the gustatory and tactile) channels are fundamental semiotic resources. The pollution of these resources reduces our quality of life. The same can be proven for the other factors of semiosis. Space limitation, however, prohibits a continued analysis here.

The semiotic resources of the sign-processes discussed can be compared to the material resources of life-processes as follows.

- (1) Material and semiotic resources are both hardly noticed as long as they are not polluted.
- (2) The pollution of a material resource (e.g., smog, industrial noise, and auto-emissions) can directly result in the pollution of the respective semiotic resource and vice versa (as in the cases of light and noise pollution).
- (3) A polluted material resource impairs not only certain individual life-processes but rather all life-processes of the same type; in the same manner, a polluted semiotic resource impairs not only individual sign-processes but rather all sign-processes which use that resource.
- (4) The negative effects of material and semiotic pollution can be reduced to a certain extent by switching to other resources; in this way, however, the pollution frequently spreads from one resource to another.
- (5) No higher forms of life can exist if all material resources are completely polluted; and, similarly, no sign-processes are possible where all semiotic resources are totally polluted.

5. Research requirements:

The investigation of channel-related, semiosis-related, and situation-related noise

The previous section makes clear that the increased levels of stress which bother people in today's densely populated regions of the world are due to semiotic pollution as much as to material pollution. To alleviate this stress it does not suffice simply to call attention to extreme examples of pollution or to protest only against those instances that affect one personally. Comprehensive criteria for action must be developed if there is to be an end put to the Band-Aid treatment of symptoms and the transfer of pollution from one resource to the next. In principle, semiotic pollution as well as material pollution can be identified objectively. Important is the development of a reliable means of measuring the pollution level in each individual resource (each semiosis factor) as well as its relative contribution to the overall level of pollution. This groundwork is needed, for example, to decide when it makes sense to strain one resource in order to relieve another.

Having to deal with polluted semiotic resources causes stress (Mayer 1979: 235). The goal is to reduce this stress. Measures of pollution must be introduced in such a way that they can be used as a basis for determining the amount of pollution-induced stress (cf. Lazarus 1990 regarding the measurement of stress), depending on the individual circumstances of the people involved (Jerusalem 1990). Regarding all these questions, there is a considerable need for research; at present, semiotic pollution research lags far behind material pollution research.

Responsible for this is, on the one hand, the wide-spread tendency to reduce all problems down to what is physically and chemically measurable and, on the other hand, the conceptual isolation of the sub-phenomena from one another. Still lacking today are sufficiently detailed models which allow (1) measuring the level of pollution of the various semiotic resources, (2) comparing these measurements, (3) determining their relative contribution to the total semiotic pollution, and (4) identifying threshold values. As Helmar Frank (2001) shows, the work of information theory in the area of cybernetics in the 1960s and 1970s laid important groundwork and information psychology made a series of applications possible. Since then, however, the remaining gap in the research needed to meet the requirements of se-

miotic environmental protection has hardly become smaller. This is true not only for determining the pollution level of semiotic resources which are as complex as sender, recipient, sign-matter, and context, but also of resources such as codes and channels, which have been relatively well studied in the framework of information theory.

What is needed can be explained with reference to the example of the channels. Information theory tries to measure channel pollution (see section 3 above) using the concept of noise. Noise is the contamination of the channel with sign-matter not stemming from the sender that was chosen by the recipient (Cherry 1967: 245). Examples of noise taken from the technical media are the cracking sounds in the telephone, the atmospheric disturbance in the radio (made noticeable by changes in the volume and distortions of the signifier), and the snow on the television screen.

A high level of noise means that the respective channel is highly strained by interfering sign-matter. This, in turn, indicates a large contribution to the overall level of semiotic pollution (see section 4 above). Aside from light and sound pollution, every-day examples of high **channel-related noise levels** are the aggravation of the olfactory and gustatory senses, and skin irritation (e.g., due to synthetic materials).

It is a common assumption that semiotic strain on the environment increases proportionately with the number of channels and the degree to which they are strained (Frank 1969). It should be noted, however, that not every increase in a given channel's noise level and not every increase in the number of highly strained channels increases the overall stress experienced by the individual (Lazarus, Folkman 1984):

- Showing a television transmission in a train station definitely increases the strain on the visual channel of the passengers waiting. The transmission of a soccer game can, however, lead to a reduction of their overall stress because it temporarily distracts them from the chaotic activities of other arriving and departing passengers.
- The endless flow of background music in an office or in a department store strains the auditory channel. It can, however, create a relaxed atmosphere which helps the people present to better deal with other types of stress.
- Similarly, perfume affects the olfactory channel. But it can be used to mask unpleasant body odours.

- At a restaurant, a special mixture of seasonings can make somewhat stale ingredients acceptable to the gustatory demands of the dinner guest.
- In a clinic, nurses are used to suddenly apply pressure with their hand in order to distract the patient from the prick of the needle.

When a signal appears in a channel and covers up another signal in the same channel, it is said that the first signal masks the second. The list above presents examples of visual, auditory, olfactory, gustatory, and tactile masking (Loeb 1986: 48–79). Masking can prevent one from perceiving sign-matter that produces stress. Despite the additional loading of the channel, masking can reduce overall stress.

The different effects that desirable and disturbing masking can have on a person's level of stress show that simply analyzing the noise level in the channel does not suffice to determine the semiotic straining caused by unintended sign-matter. In order to determine the level of semiotic stress one must take into consideration not only the noise level but also the type of noise.

One must also address the question of whether the maskings occur only in specific instances (such as skilled hospital staff giving a shot) or if they occur constantly in order to hinder the perception of a certain type of noise. An example of constant masking is the continuous background music in department stores, public transportation systems, and open-area offices (Korn 1975, Fehling 1976, Körner 1979). In open-area offices, masking may have a positive side-effect on employees: others cannot hear what is being said in a conversation so that, despite the visual transparency of the situation, the interlocutors can enjoy a certain amount of auditory privacy. However, no background music is one-hundred percent emotionally neutral; each person present is subject to the music, whether s/he wants to be or not. Those who do not want to or cannot be soothed, or those who require maximum auditory differentiation and, therefore, need their own beat must be extremely annoyed by all background music (Mayer 1979: 226). The unwanted introduction of foreign signs into a channel that one needs completely for the recognition of intended signs, combined with the impossibility of escaping the situation, turns background music for these people into a classic case of semiotic pollution.

It makes sense to extend the concept of masking to refer also to the interference between signs of different channels (Loeb 1986: 48). Thus, semiotic stress cannot be determined solely on the basis of noise in just one channel. Sign-matter that does not stem from the recipi-

ent's chosen sender can also reach the recipient via a channel other than the chosen one and, in this manner, affect the reception of the intended signs. A student's communication with an instructor in a seminar can be negatively affected by the noise in the adjacent room (same auditory channel), the activities of people in street traffic that is mirrored in the window pane (visual channel), and even his/her own seat that is uncomfortable and scrapes the back (tactile channel).

Therefore, it is suggested that the concept of noise also be extended. In the broader sense, noise is to be understood as all sign-matter that does not come from the intended sender through the chosen channel and which disturbs the reception of the sender's sign-matter, independent of the channel through which the disturbance arrives (Fiske 1982: 8). This approach suggests that, in addition to the channel-related noise level, a **semiosis-related noise level** has to be assumed which incorporates all channels involved. A determining factor for the success of sign reception is the number of other signs that simultaneously reach the recipient through any channel. The activities in the field of vision are just as important as sounds and smells. Semiosis-related noise is the weighted sum of the various channels' noise levels during a given sign-process. The weighting is necessary so that individual circumstances can be taken into account when drawing conclusions from semiosis-related noise about the stress for a particular person involved in a given sign-process.

Our well-being, however, depends not only on the presence or lack of stress involved in a particular sign-process. Rather, it depends on the entire situation and the signs which confront us during this situation. To identify this situation and determine its semiotic strain, one must observe the entire channel constellation for a longer period of time and not just for the duration of one sign-process. For example, a man leaves the house, sees a street lamp and the lights of the passing cars, hears the traffic sounds muted by the trees, smells the slightly musty aroma of fallen leaves, and, at the same time, feels the weight of his briefcase in his left hand. The totality of these relatively constant impressions comprise the backdrop of more specialized sign-processes which might take place between the man and his companion. Advanced semiotics should be able to determine the average overall noise level in all channels that the two persons must overcome if they are to conduct a continuous conversation.

Advanced semiotics must also be able to compare the different types of sign-production situations with regard to semiotic stress.

What people want to say and can say to one another depends a great deal on their location: in an office in the centre of town, on a street in a large city, in a car in city traffic or on the highway, in a forest, on a beach, or in the mountains. The level of stress depends not only on the people's individual circumstances but also on the situation-specific noise in the channels. A **situation-related noise level** can be understood as the average overall strain produced by the noise levels in all channels during any sign-process that might take place in a given situation. Both the situation-related noise level and the individual circumstances of the persons involved are constitutive of the stress perceived in a specific situation.

As a result, these considerations charge researchers with the development of the necessary tools to operationalize and metricize the concepts of channel-related, semiosis-related, and situation-related noise. This groundwork must be laid in order to effectively measure semiotic pollution and start counteracting it.

References

- Böhret, Carl 1990. *Folgen: Entwurf für eine aktive Politik gegen schleichende Katastrophen*. Opladen: Leske and Budrich.
- Bouissac, Paul 1993. Semiotisches Wettrüsten: Zur Evolution artübergreifender Kommunikation. *Zeitschrift für Semiotik* 15(1/2): 3–22.
- Carson, Rachel 1962. *Silent Spring*. Boston: Houghton Mifflin.
- Cherry, Colin 1957. *On Human Communication*. Cambridge MA: Technology Press.
- 1967. *Kommunikationsforschung: Eine neue Wissenschaft*. Transl. by P. Müller. Frankfurt a.M.: S. Fischer. [1st German edition 1963.]
- Dorst, Bernd 1988. Aktueller Nachtrag. In: Gourlay, Ken A., *Mord am Meer*. Transl. by E.v. Kardorff and G. Zelisko [German translation of Gourlay 1988.] Munich: Raben, 291–311.
- Fehling, Reinhard 1976. *Manipulation durch Musik: Das Beispiel "Funktionelle Musik"*. Munich: Raith.
- Fiske, John 1982. *Introduction to Communication Studies*. London: Methuen.
- Frank, Helmar 1969. *Kybernetische Grundlagen der Pädagogik*, vol. 1–2. Baden-Baden: Agis.
- 2001. Semiotik und Informationstheorie. In: Posner, R.; Robering, K.; Sebeok, T. A. (eds.), *Semiotics: A Handbook on the Sign-Theoretic Foundations of Nature and Culture*, vol. 3. Berlin: de Gruyter (Art. 125, in print).
- Gourlay, Ken A. 1988. *Poisoners of the Seas*. London: Zed Books.

- Honkasalo, Antero 1996. Environmental noise as sign. *Semiotica* 109(1/2): 29–39.
- Jerusalem, Matthias 1990. *Persönliche Ressourcen, Vulnerabilität und Streß-Erleben*. Göttingen: Hogrefe.
- Koch, Ekkehard 1983. *Der Weg zum blauen Himmel über der Ruhr*. Essen: VGB-Kraftwerkstechnik-Verlag.
- Körner, Klaus 1979. *Akustische Reizüberflutung*. Lilienthal bei Bremen: Eres.
- Korn, Peter J. 1975. *Musikalische Umweltverschmutzung*. Wiesbaden: Breitkopf and Härtel. [3rd edition 1981.]
- Kur, Friedrich 1986. *Vom Lebens-Wandel der Lebensräume: Gefährdung, Zerstörung und Schutz von Groß- und Kleinbiotopen*. Munich: dtv.
- Lagadec, Patrick 1987. *Das große Risiko: Technische Katastrophen und gesellschaftliche Verantwortung*. Nördlingen: Greno.
- Lazarus, Richard S. 1990. Theory-based stress measurement. *Psychological Inquiry* 1: 3–13.
- Lazarus, Richard S. and Folkman, Susan 1984. *Stress, Appraisal, and Coping*. New York: Springer.
- Loeb, Michel 1986. *Noise and Human Efficiency*. Chichester: Wiley.
- Mayer, Horst 1979. Das Stressmodell als Erklärungsprinzip. In: Hahn, P. (ed.), *Die Psychologie des 20. Jahrhunderts*, vol. 9: *Ergebnisse für die Medizin*. Zürich: Kindler, 223–260.
- Nöth, Winfried 1996. Ökosemiotik. *Zeitschrift für Semiotik* 18(1): 7–18.
- Posner, Roland 1989. What is culture? Toward a semiotic explication of anthropological concepts. In: Koch, W. A. (ed.), *The Nature of Culture*. Bochum: Brockmeyer, 240–295. [German version: Was ist Kultur? Zur semiotischen Explikation anthropologischer Grundbegriffe. In: Landsch, Marle; Karnowski, H. and Bystrina, J. (eds.), 1992. *Kultur-Evolution: Fallstudien und Synthese*. Frankfurt a.M.: P. Lang: 1–66.]
- 1997. Pragmatics. In: Posner, R.; Robering, K.; Sebeok, T. A. (eds.), *Semiotics: A Handbook on the Sign-Theoretic Foundations of Nature and Culture*, vol. 1. Berlin: de Gruyter, 219–246.
- 1998. Fighting semiotic pollution in Europe: Dutch and German-speaking semiotic communities in the 20th century. In: Hess-Lüttich, Ernest W. B.; Müller, Jürgen E. and Zoest, Aart van (eds.), *Culture, Sign, Space — Kultur, Zeichen, Raum: An International Conference on the Semiotics of Space and Culture in Amsterdam*. Tübingen: Narr, 381–395.
- Prieto, Luis J. 1966. *Messages et signaux*. Paris: Presses Universitaires de France.
- 1972. *Nachrichten und Signale*. (Transl. by G. Wotjak.) Munich: Hueber. [German translation of Prieto 1966.]
- 1975. *Pertinence et pratique: Essai de sémiologie*. Paris: Minit.
- Reiser, Bernhard and Mertzloff, Simone (eds.) 1988. *Abfall vermeiden: Leitfaden für eine ökologische Abfallwirtschaft*. Frankfurt a.M.: Fischer.
- Rogge, Klaus-Eckart 1981. *Physiologische Psychologie*. Munich: Urban and Schwarzenberg.

- Rohrmann, Bernd 1984. *Psychologische Forschung und umweltpolitische Entscheidungen: Das Beispiel Lärm*. Opladen: Westdeutscher Verlag.
- Schmauks, Dagmar 1997. Die Rolle des Lichts in Zeichenprozessen. *Schriften der Arbeitsstelle für Semiotik* 1. Berlin: Technische Universität, 1–12.
- Selye, Hans 1976. *The Stress of Life*. New York: McGraw-Hill.
- Tanner, Wilson P. 1958. What is masking? *Journal of the Acoustical Society of America* 30: 919–921.
- Thompson, Michael 1979. *Rubbish Theory: The Creation and Destruction of Value*. Oxford: Oxford University Press. [In German: 1981. Die Theorie des Abfalls — Über die Schaffung und Vernichtung von Werten. Transl. by K. Schomburg. Stuttgart: Klett.]
- Weizsäcker, Ernst U. von 1989. *Erdpolitik: Ökologische Realpolitik an der Schwelle zum Jahrhundert der Umwelt*. Darmstadt: Wissenschaftliche Buchgesellschaft. 2nd, updated edition 1990.
- Wirth, Uwe 1995. Abduktion und ihre Anwendungen. *Zeitschrift für Semiotik* 17(3/4): 405–424.
- Wolf, Winfried 1988. *Eisenbahn und Autowahn: Personen- und Gütertransport auf Schiene und Straße*. Zürich: Rasch.

Семиотическое загрязнение: размышления об экологии знаков

В данной статье материальное загрязнение элементарных жизненных ресурсов (воды, почвы, и воздуха) сравнивается с семиотическим загрязнением элементарных ресурсов знаковых процессов (канал, знаковая материя и сообщение; код, означающее и означаемое, а также контекст, отправитель и получатель). Утверждается, что семиотическое загрязнение сопряжено со знаковыми процессами, так же как материальное загрязнение с основными жизненными процессами; сходство этих двух типов загрязнения в том, что они вызывают стресс у людей в современных обществах. Доказывается, что семиотика способна обеспечить концептуальные инструменты для выработки мер снижения семиотического загрязнения. Однако, как показано, для операционализации и метризации общих концептов семиотического загрязнения, таких как “шум в канале связи”, “семиозисный” и “ситуационный шум”, требуется дополнительное исследование.

Semiootiline saastamine: mõtisklus märkide ökoloogiast

Antud artiklis võrreldakse elementaarsete eluressursside (vee, mulla ja õhu) materiaalset saastamist märgiliste protsesside elementaarsete ressursside (kanal, märgimateeria ja teade; kood, tähistaja ja tähistatav, aga samuti kontekst, adressaat ja adressant) semiootilise saastamisega. Väidetakse, et semiootiline saastamine on seotud märgiliste protsessidega samal moel, nagu materiaalne saastamine põhiliste eluprotsessidega — nende kahe saastetüübi sarnasus seisneb selles, et mõlemad kutsuvad tänapäeva ühiskonna inimestes esile stressi. Kinnitatakse, et just semiootika on võimeline kindlustama kontseptuaalsed instrumendid, töötamaks välja vahendid semiootilise saaste vähendamiseks. Kuid semiootilise saaste üldiste kontseptide, selliste nagu “müra sidekanalis”, “semioosne ja situatsiooniline müra” operatsionaliseerimiseks ja mõõdustamiseks on vajalikud täiendavad uurimused.

Teddy bears, Tamagotchis, transgenic mice: A semiotic typology of artificial animals

Dagmar Schmauks

Technical University Berlin,
Ernst-Reuter-Platz 7, D-10587 Berlin, Germany
e-mail: dagmar.schmauks@tu-berlin.de

Abstract. The expression “artificial animal” denotes a range of different objects from teddy bears to the results of genetic engineering. As a basis for further investigation, this article first of all presents the main interpretations and traces their systematic interconnections. The subsequent sections concentrate on artificial animals in the context of play. The development of material toys is fueled by robotics. It gives toys artificial sense organs, limbs, and cognitive abilities, thus enabling them to act in the real world. The second line of development, closely related to research into Artificial Life, creates virtual beings “living” on computer screens. The most essential difference between these variants are the sense modalities involved in interaction. Virtual beings can only be seen and heard, whereas material toys can be touched as well. Therefore, the simulation of haptic qualities plays an important role. In order to complete the proposed typology, two further areas are outlined, namely artificial animals outside play and “artificial animals in the medium of flesh” which are alive but designed and created by man. Research on artificial animals belongs to an extended notion of ecosemiotics, as they are part of ecosystems which may themselves be virtual such as the Internet.

1. Introduction

The expression “artificial animal” has several interpretations which can be classified by semiotic categories. Three sign functions are of special interest for ecosemiotics: artificial animals may represent liv-

ing animals, substitute them in specific contexts, or be intended as an improvement of nature.

In the standard case, “artificial animal” means representations of living animals. Classical toys such as teddy bears are material and therefore three-dimensional models which can be perceived by all sense modalities. During the last few years, virtual (or digital) animals have been created which are two-dimensional representations on a computer screen. In contrast to traditional pictures, they can move and may have a voice. And in contrast to artificial animals in movies (like the Aristocats or Roger Rabbit), the player can interact with them.

The second interpretation suggests that animal representations are “artificial” only if they do not have a model in reality. Examples include the fabulous beasts of mythology and the monsters from outer space in science fiction. Hybrids of man and animal (e.g., sirens, centaurs, and sphinxes) and later on of living beings and machines (cyborgs) are typical here. They all exist initially only in the fantasy of their inventor and are introduced to common imagination by texts, pictures, films, or sculptures. The fact which is not investigated here is that many artificial animals can be interpreted as caricatures of human beings. Donald Duck and his relatives, for example, are not only ducks whose adventures please their readers, but also a model of the human condition in which all characters are stereotypes as in the *commedia dell’arte*.

The third interpretation of “artificial animal” is a living animal which has been “artificially” created by man. Under natural circumstances, only closely related species cross-breed spontaneously — for example, the mule is a cross-breed of horse and donkey. Genetic engineering, however, allows for cross-breeding of more distant species, even of plants and animals, or of animals and man. The result may be creatures which are “mixed” like fabulous beasts. The circle of development closes in the case of re-breeding which is intended to slow down the loss of biodiversity.

These three readings are systematically interconnected. Dealing with living animals encourages fantasies in which animals are “mentally divided” into their body parts which are then “freely composed” into fabulous beasts. Sometimes nature itself offers such impulses, namely by deformed children and animals. Through observation the features in question become “parametrized”. If, e.g., calves with two heads or six legs are born, the number of heads and legs is no longer a constant factor. And vice versa: the “invention” of fabulous beasts

may be one of the sources which has established genetic engineering as a scientific vision. Furthermore, fabulous beasts can become inter-subjectively available as material or virtual toys. And handling them may influence behavior towards living animals. “Animal Makers”, for example, who produce artificial animals for Hollywood, support organizations committed to the protection of animals on film sets.

Models of animals belong to the earliest remains of material culture, but whether they were toys, sacrifices or mere decoration is not always easy to decide. In ancient Egypt, for example, models of live-stock were placed in tombs in order to guarantee the eternal alimentation of the deceased. Since then, man has created a variety of artificial animals, often by using the most advanced technology. Multifunctionality is frequent, for example, toys may be amulets at the same time.

The following sections offer a typology of artificial animals. The main emphasis is placed on artificial animals in the context of play, the development of which is characterized by the simulation of more and more live-functions (section 2). The history of material toys ranges from simple static models and clockwork toys to today’s robotic toys which simulate locomotion, perception, sound utterances, and units of behavior (“Fetch the stick!”). The second line of development — related to research into Artificial Life — creates virtual animals such as Pokémons which “live” on computer screens. Their simulation consists of metabolism, growth, and social behavior (including reproduction), and even a quasi-genetic optimization to a specific environment may take place. Section 3 gives an impression of the manifold simulation of animals outside play which is another fruitful area for semiotic investigation. The same is true for artificial animals in the medium of flesh which is outlined in section 4. The presentation is closed by a conclusion and an outlook analysis in section 5.

2. Artificial animals in the context of play

In the context of play, more and more live functions are simulated. From a semiotic point of view, the most essential difference between material (2.1) and virtual (2.2) toy animals are the sense modalities involved in interaction. Virtual animals can only be seen and heard, whereas the material ones are often specifically intended to stimulate the skin. Therefore, the simulation of haptic qualities — such as temperature, softness, elasticity, and texture — plays an important role.

2.1 Material toy animals

The history of toy animals can be traced from various viewpoints, for example, as a part of cultural history (cf., e.g., Fraser 1966 and Bryant-Mole 1996) or as a reflection of didactic concepts. The following investigation concentrates on toys which — at least roughly — imitate animals' appearance. "Natural toys" such as stones and cones are not considered here, although they can adopt the roles of animals during play. This section concentrates on two aspects which are relevant for a semiotic analysis, namely the simulation of live functions (2.1.1) and of haptic features (2.1.2).

Toy animals are frequently designed as the elements of complex scenarios. Paradise and Noah's ark are famous historic examples motivated by religious belief. Other scenarios depict the everyday life of pre-industrialized farming — often idealized by nostalgia, as in the case of farms with free-range animals (the fact that no toy sets simulating industrialized livestock breeding exist may be read as an indication that we feel ashamed in front of our children). Some further scenarios are already second-order models because concepts such as "zoo" and "circus" are themselves culture-specific models of nature and its relationship to man.

There are manifold ways in which toys are given a "serious" function and vice versa, for example, on the one hand, a teddy bear promotes the canned milk brand name "Bärenmarke", and on the other hand, the Berlin bear as a heraldic sign is sold as a soft toy. However, this is not treated in more detail here.

2.1.1 The simulation of live functions

In the beginning of history, all toy animals were static and silent. The first simulation of movement are toys for dragging and those with moving parts. Fraser (1966: 26 and 31) shows examples from around 1100 B.C., namely a lion on wheels and a crocodile with movable lower jaws. Also in the case of rocking horses (cf. Mullins 1992), it is the player himself who makes them move. Although singular automata such as singing birds or picking hens are known to have existed since Western and Chinese antiquity (cf. Fraser 1966: 108ff), the simulation of movement and voice remained an exception until the

late 19th century. By means of clockworks and later on by batteries, moving toy animals started to be produced. Phonographs and later on acoustic chips gave them voices. In contrast to ancient rattles which only make noise (Fraser 1966: 49), modern devices allow for producing species-specific sound utterances like grunting or barking.

Today, a highly sophisticated simulation of live functions has become possible. One line of development is fueled by robotics. It gives toy animals ("toybots") artificial sense organs, artificial limbs, and cognitive abilities such as planning and reasoning, thereby enabling them to perceive their environment and to act in the real world. One long-term objective is the motor-driven robot-cat "Robokoneko" whose "brain" is to contain 40 million artificial neurons arranged in modules. Each neuronal net can be optimized by quasi-genetic processes for a specific task such as the recognition of "prey". The cat "sees" by video camera, "hears" by stereo microphones, and also the tactile hairs contain sensors. A sound generator allows for miaowing, purring, and other sound utterances.

Robot-dogs such as "Aibo" and "I-Cybies" are also already available. I-Cybies was presented in February 2000 at the Nuremberg toy-fair in Germany. When activated, his speech recognizer adapts to his master's voice, and afterwards, he obeys only him. I-Cybies can bark, howl, roll, and follow simple orders like following his master, standing on his hind legs, and retrieving. During locomotion, he avoids hitting obstacles. He knows his name, and interaction with his environment results in specific "moods" which he expresses by "facial expression". For example, he droops his ears sadly if not sufficiently caressed. Another subsystem of mood expression, however, has no model in reality: if I-Cybies is happy, his otherwise green eyes glow red.

Whereas these toybots are intended to appeal to adults, "Furbies" are primarily designed for children. They look like normal soft toys, but contain enough computer technology to be treated as "partly animate" (cf. Pesce 2000). They interact with their environment, show their mood by facial expression and gaze behavior, and have a "language" evolving from a childlike patois ("Furbish") to a rudimentary English.

2.1.2 *The simulation of haptic features*

The 20th century brought the rise of soft toys. At first, only furry mammals such as bears and cats were simulated (cf. Fraser 1966: 182f), later on also animals which are phylogenetically more distant from man, e.g., marine mammals, reptiles, and even spiders and other invertebrates.

From semiotically perspective it is interesting how the naturalness of simulation systematically varies due to the different features. The animal's general shape — the main criterion for identifying the species in question — is normally simulated to a comparably high degree. Some stylization may take place, for example the face may be modified to look more "human" or more "childlike". The color, however, is frequently changed completely. Pink lions and blue horses occur, maybe in order to please small children. If raised in an urban environment without contact with real livestock, children may acquire wrong beliefs about real animals' colors. A famous example is a long-term advertising campaign by Milka (Swiss chocolate) which makes children believe that cows are violet.

One special aspect is the simulation of haptic features. Real specimens have stunningly manifold "surfaces". Mammals' coats are curly or straight, silky or bristly, scanty or straggly. Birds have feathers, fishes and reptiles have scales of different types, turtles have shells, and snails have a slimy skin. In toy production, however, this variability may be reduced to only two extremes, namely the uniform fluffiness of toys for cuddling and the disgusting sliminess of creepy-crawlies. The affective component may play a minor role in the case of toy collectors, but frequently, artificial toys trigger intense feelings. The numerous Halloween monsters are intended to provoke a reaction of fear or disgust.

Most toy animals, however, are intended for being loved as individuals, and a soft toy acquired in childhood may really become a "lifetime companion" (there are even guides about how to treat them well, cf. Ricketts 1969). Their sign function may change depending on their owner's age. For younger children, toy animals can substitute living animals to a high degree — they lovingly feed, brush and hug their toy cat. Older children intentionally switch between treating toy animals as living or as mere artifacts. For adults, toy animals may be signs of craftsmanship, of their donator's love, or lucky charms.

With regard to this long-term usage and emotional impact, leading toy manufacturers such as “Steiff” or “Kösel” aim to produce highly naturalistic toy animals which carefully imitate their models’ visual features — including color — and the haptic features of their skin. This may require the use of costly hand-woven furs the uneven texture of which looks and feels realistic.

The interior of objects, and especially of living beings, is normally not visible in reality. This normal opacity of flesh contributes to the fascination of transparent animals like jellyfishes and some geckos. Only in the case of severe injuries does the interior of living beings become accessible for visual and haptic exploration. But open fractures and the opening of cavities are traumatic for the affected as well as for the observer. Physicians, however, need this kind of “insight”, and also modern diagnosis from X-ray to computer tomography cannot substitute for the visual-haptic knowledge acquired during autopsy.

If the interior of toy animals is accessible, these animals often have an educational objective. Since the 1980’s, soft toys with babies in their womb allow for the simulation of birth. The detailed “anatomy teddy” allows children to literally “grasp” the location and shape of inner organs. Furthermore, this teddy is aimed at decreasing the fear of doctors and surgery due to its ability to completely “recover” (whereas unintended examinations of a normal teddy’s interior tend to cause its destruction).

2.2 Virtual toy animals

The second line of the development of toy animals is closely related to Artificial Life, a branch of science which is located between biology and computer science (cf., e.g., Magnenat-Thalmann and Thalmann 1994 as well as Hokkanen 1999). Virtual — or digital — beings are computer-generated animation which are visible on the screen, move, and may have a voice.

Virtual fishes living in a virtual marine world are a scientific example (cf. Tu 1996). The simulation of individuals exhibits a complex repertoire of behavior, for example, avoiding obstacles, searching for food, and fleeing from predators. The underlying “intention generator” is based on a hierarchy of behavior in which the most basic desires have the highest priority. For example, the desire to eat or to mate can

only occur if there is no danger of hitting an obstacle or being killed. If life-cycles are simulated as well, the individuals are born, grow, and die. In order to gain such complexity, the basic physics of the animals and their environment has to be modeled.

With groups of animals, social behavior including mating and breeding may be simulated, and even a quasi-genetic adaptation to a specific environment may take place. Research in this area sometimes uses a special terminology, calling living beings (including humans) "animals" and virtual beings "animats" (cf. Pfeifer 1998, as well as the previous Proceedings of the Conferences on Simulation of Adaptive Behavior). With regard to this typology, virtual animals are a special case of animats which also comprise virtual humans (which may be "avatars": virtual counterparts of Internet users) and all sorts of hybrids and fictional beings. If virtual beings "live" in the Internet — as a virtual ecosystem — and come into contact with many users, a virtual coevolution may take place during which each species refines its capabilities (cf. Funes *et al.* 1998).

From the viewpoint of computer science, creating virtual animals can fertilize the evolution of interactive adaptive software. For ethology, on the other hand, carefully designed artificial animals are useful tools for systematic studies of animal behavior (cf. Tu 1996). As they are structural as well as functional models, all levels from sensomotrics to cognition can be studied and modified without animal experiments. Furthermore, investigations of genetic adaptation profit from the fact that life-cycles of virtual animals may be extremely short. This research belongs to an extended notion of ecosemiotics because virtual worlds may be counted as ecosystems as well. The Internet, for example, can be seen as a virtual ecosystem, namely a community of human users and virtual beings where complex interaction is taking place (cf. Funes *et al.* 1998, chapter 1).

Commercially sold virtual animals exploit all these scientific results. In 1997, the "Tamagotchis" came from Japan to Europe. These "virtual chickens" live on the display of egg-sized "worlds" and need to be fed, nursed, and entertained by pressing buttons. They actively ask for attention by cheeping, but unnecessary cheeping has to be "punished". Their life span is restricted to 30 days, and neglect makes them die much earlier. They can be revived by the RESET-function (which raises the existential question of personal identity...) or be buried in specific Internet cemeteries. Furthermore, their producers

assume that after death they return to their home planet — a philosophy which intermingles real and virtual world.

Two years later the “Pokémons” succeeded to the throne (and are already being replaced by the “Digimons”). Each Pokémon belongs to a species with specific powers such as fire, electro, or psycho. Meanwhile, some hundred Pokémons now exist, each of which has to be caught by skill and perseverance. Only by optimal training can a Pokémon develop in a species-specific manner. The aim of the training is to own a whole army of Pokémons to fight against others. This example shows that virtual animals require more and more involvement from the side of the user. A teddy bear may be forgotten for weeks without any damage — the optimal development of a Pokémon, however, requires extensive care over a considerable amount of time.

In contrast to Tamagotchis, Pokémons are part of a whole (commercial...) universe comprising also films and figures. As soon as virtual animals get material counterparts, the borders between the two realms are blurred. Furthermore, such animal figures are frequently introduced into new contexts. As a typical example, animals which have originally been produced for films may be sold later. Depending on the intentions of its new owner, a sculpture of Mickey Mouse can be used as a toy, exhibited as a piece of art, or become a coat stand.

In the Internet, catchwords such as “cyberlife”, “virtualkitty”, or “swineonline” lead to numerous virtual species which can be acquired. Many of them are only intended for playing and nursing, but virtual variants of hunting also exist. Virtual fishing rods are operated by real hand movements and allow for the choice between different bodies of water, baits, and times of the day. But the seamless integration of real and virtual world fails because the rod can’t be exposed to humidity — the manual explicitly prohibits its use at riversides...

3. Artificial animals outside play

Numerous simulations of animals also exist outside play. The aim of this section is to list some suggestive examples in order to stimulate more detailed semiotic analyses.

Many artificial animals outside play have decorative function. One has to distinguish between variants which are designed as mere decorations (knick-knacks, jewelry, ...) and those which have a practical

purpose as well (piggy banks, weathercocks, butcher's figurines of cows and pigs, ...).

In didactic contexts, there is no clear-cut difference between specimen and model — frequently, a real coat is put on a model made of gypsum (“dermoplastics”). This intermingling of model and representation is quite rare in the case of toys — stuffed chickens and ducklings which are sold around Easter on Austrian markets are a strange exception.

Animal models in bionics is a highly complex simulation by which the principles of living beings are investigated for translation into technical devices. The solutions of evolution — tested for millions of years — are studied with respect to the question whether they can be emulated by using non-organic materials.

Another special case are artificial animals used for camouflage such as the Trojan Horse in which a group of enemy soldiers hid. A life-size iron ox for torturing was created by the artist Perillus for Phalaris, the ruler of Agrigent. The convicted were roasted to death in the oxen's hollow body, and specific sound pipes transformed their cries so that they resembled the bellowing of an ox. A Greek legend (cf. Ranke-Graves 1960, I: 265f) tells of a camouflage due to trans-species love. Minos, the king of Crete, kept a wonderful bull which belonged to Poseidon. Poseidon cursed Pasiphaë, Minos' wife, to fall into love with this bull. She requested Daedalus to build a hollow wooden cow, covered by cow's hide (cf. some murals in Pompeji, Reinach 1922: 183). Hidden in the cow, Pasiphaë seduced the bull. The result of this mating is the Minotaure (with the head of a bull on the body of a man) for whom Daedalus later on built the famous labyrinth.

As in the case of toy animals, the simulation may comprise more or less features of the living animal. The high-tech security system called “Power Dog”, for example, is a purely acoustic simulation which reduces a dog to its voice. The “digital barking” — which the manual describes as “truly natural” — is triggered by a motion sensor and is to make burglars believe that a huge dog is guarding the house.

Much more complex simulations are used in livestock breeding. Today, the artificial insemination of working animals is a standard procedure. However, it is only efficient if the sexual behavior of the species in question is taken into account. From foreplay to intercourse, it can be reconstructed as a chain of reflexes which coordinate the behavior of two individuals. If there is no contact between male and fe-

male, the elements of the natural situation have to be simulated by different means (cf. Busch, Löhle und Peter 1991; semiotic reconstruction in Schmauks 2000). During semen collection, the female animal is normally replaced by a so-called “phantom”, i.e., a dummy. It depends on the species in question to which extent phantoms must be true to nature. The minimal variant only has the structure of an archway, i.e., resembles a female’s backside. Cow phantoms may be much more elaborate, simulating a cow’s body with respect to size, volume, and color in order to offer distal visual stimuli. Its covering by cow hide additionally renders olfactory and tactile stimuli. The most relevant part is the artificial vagina which may be built into the phantom or handled separately by the veterinarian. Filling the double-walled vagina with warm water simulates body temperature, and the pressure at the opening can be adapted to the liking of individual bulls. Vaseline simulates the tactile experience of the mucous membrane which triggers the immissio-penis reflex.

4. Artificial animals in the medium of flesh

Finally, in order to complete the proposed typology of artificial animals, it is important to ask to which extent the expressions “artificial” and “organic” still denote opposites, or, in other words: to which extent the artificial already exists in the medium of flesh.

Since the beginning of domestication in the Neolithic period, one aim of breeding has been the targeted modification of the animals’ features. The selection of such desirable features always depends on circumstances: whereas in war times robust pigs delivering much bacon may be desired, in times of abundance lean pigs with additional chops are preferred. This development is “artificial” because it serves human goals, and it causes the loss of the “natural”, namely of biodiversity.

Many cultures have mythical beings which are mixtures of different species. In ancient Greece, “chimaera” was at first the proper name of a creature with three heads: that of a lion, a goat, and a snake. Later on, the derived common noun “chimera” denoted all “mixed” beings. In some of them, one species dominates, e.g., the horse in the unicorn. Other examples — like sirens, sphinxes, centaurs, basilisks, and harpies — are more balanced mixtures. The transportation of such mythi-

cal beings into reality has always been a fascinating aim, the achievement of which gives their creator a feeling of god-like power.

A step towards real cross-breeding is the “incarnation” of fabulous beasts made from dead specimens. One example from Bavaria, called “Wolpertinger”, is created in order to deceive tourists. In the standard case, it has the body of a marmot, roebuck’s antlers, and duck’s feet. This is a very practical interpretation of the postmodern term “bricolage”.

Several branches of today’s biology create living chimeras. Plants which are closely related can be “mixed” non-sexually by grafting. Useful plants and domestic animals are frequently cross-bred in order to ameliorate one species or to combine desirable features of two species (“hybrids”). Hybrids for usage may be sterile like the mule.

Genetic engineering even allows for cross-breeds which are impossible in nature. Genes of another species are introduced into the DNA of such “transgenic” animals in order to reach specific goals, for example in human medicine. Transgenic mice are susceptible to human diseases such as arteriosclerosis, cancer, or AIDS, thus allowing for the testing of new therapies. A highly controversial subject for discussion is the use of genetic engineering in art — such as the albino-rabbits of Eduardo Kac which fluoresce in the dark due to insertion of a gene of the jellyfish (Schmundt 2000).

In Ovid’s *Metamorphoses* (1992), some humans — such as Narcissus, Hyacinthus, and Myrrh — are transformed into plants which then carry their names. Even such mixing of plants and animals has become possible by genetic engineering. A specific gene of the winter flounder prevents the water in the cells from freezing. By introducing this gene into tobacco plants, the latter become frost-resistant.

Unicorns and other fabulous beasts of the Ancient World — which have become a part of general world knowledge by textual and pictorial representations — surely have inspired cross-breeding as a scientific vision. On the other hand, the confrontation with deformed children and animals may have inspired the invention of fabulous beasts — this was Rudolf Virchow’s basic premise when establishing the “Medical Collection” of the Charité in Berlin. By presenting a “second-order chimera” of four mythical beasts, Petermann and Schmauks (1999) aim at breaching the gap between mythology and genetic engineering from the other side. The result of this virtual cross-breeding is called “Sphingahornix cyclopica” — with the body

of a sphinx and a mermaid's tail, one-eyed like a cyclops and one-horned like a unicorn.

A special case of "artificial" cross-breeding is re-breeding — the attempt to regain species which are already extinct in reality. Commercially oriented livestock breeding concentrates on desirable features, thus always resulting in an irretrievable genetic loss. In intensive livestock breeding, it is irrelevant whether animals are good mothers, get by on very little food, or can cope with rough weather. The most important aspect is that they are ready for slaughtering as soon as possible and render lean meat matching the clients' liking.

Alarmed by the dramatic shrinking of biodiversity, appreciation of old species of domestic animals has grown since the 1980's. Because some of them were already extinct, a targeted re-breeding was started. But an extinct species can never be regained in a strict sense. It is only possible to breed the descendants and wildlife forms for recombining remaining genes. The result are animals whose appearance and behavior resembles the original species as closely as possible. One example is the re-breeding of pigs: In 1980, Berlin's Free University started the breeding of wild boars, Hungarian Mangalitzas, and other land races for re-breeding the robust and undemanding "Düppeler Weideschwein" which is especially suited for extensive farming (cf. Hörning 1997: 56ff).

Saving endangered species can be attempted by genetic engineering as well. Fertilized eggs of the species in question can be cloned and then carried to term by surrogate mothers of closely related species. The "production" of embryos by fusing (arbitrary) cells of the endangered species and eggs without nuclei from other species is even more costly. Although such re-breeding cannot stop the general loss of genetic variability, it can at least reduce its negative results.

Depending on the advocated world view, all these artificial animals (or the intention to create them) are read as signs of human creativity, power, or *hybris*. For some theistic religions, e.g., the attempt to "be like God" is the ultimate sin, leading to eternal damnation.

5. Conclusions and outlook

The typology proposed here calls for a deepened semiotic investigation of the variants which have been distinguished. But already this sketchy presentation shows the variability of artificial animals which

can be ordered according to “naturalness”. At one pole, minimal models are located which only simulate a singular feature — like “Power dog”, reducing a dog to its barking (cf. section 3). At the opposite pole, the model’s aim is to simulate more and more features. Here, sophisticated animats are located which are not only naturalistic models of individuals, but also form virtual societies and live in an environment modeling the laws of physics.

Projecting current trends results in manifold visions, each of them based on different notions of “reality”, “nature”, and “mankind”. From a humanistic viewpoint, intense contact to animals is always suspicious — as a waste of time, as a sign of misanthropy, or as a kind of perversion (“social sodomy”). This objection is intensified with regard to artificial animals. Other thought experiments not only welcome robot pets as new attractive toys but also enthusiastically introduce them to other tasks. Examples include geriatric nursing where they will be — like their living models — the last social contact of aged people.

Furthermore, artificial animals — which can be “neglected” or even “killed” without irreversible results — are suspected to cause an alineated attitude towards living beings. The essential didactic goal of keeping pets, namely the sensibilization for life’s fragility, obviously cannot be reached in the realm of the virtual.

As soon as artificial animals become complex enough, we have to face the ethical question of how to treat them correctly. Such discussions will become more important the more we are convinced that they have “feelings” and even some “intelligence” (one can also argue that artificial beings — like other cultural assets — should be protected, even if their higher mental functions are not proven).

It has to be added that the ethical treatment of artificial beings should be in appropriate relation to our treatment of living beings. For example, it can be interpreted as a clear indication for our alineated attitude towards nature, if we have scruples about hitting a Furby, but accept the conditions of industrialized livestock breeding in which millions of animals undoubtedly feel pain and are kept far away from natural conditions.¹

¹ Acknowledgements. Thanks are due to Kalevi Kull and Roland Posner for helpful comments on the previous version of this paper.

References

- Asimov, Isaac 1956. *The Caves of Steel*. London: Science Fiction Book Club. (German: *Der Mann von drüben*. München: Heyne 1978.)
- Bryant-Mole, Karen 1996. *Toys Discovered Through History*. London: A & C Black.
- Busch, Walter; Löhle, Klaus; Peter, Winfried (eds.) 1991. *Künstliche Besamung bei Nutztieren*. Jena and Stuttgart: Fischer.
- Fraser, Antonia 1966. *A History of Toys*. London: Weidenfeld & Nicolson. (German: *Spielzeug. Die Geschichte des Spielzeugs in aller Welt*. Oldenburg: Stalling 1966.)
- Funes, Pablo; Sklar, Elizabeth; Juillé, Hugues; Pollack, Jordan 1998: Animal-Animal Coevolution: Using the Animal Population as Fitness Function. In: Pfeifer, Rolf (ed.), *From Animals to Animats 5: Proceedings of the Fifth International Conference on Simulation of Adaptive Behavior*. Cambridge MA: The MIT Press, 525–533.
- Hörning, Bernhard 1997. *Gefährdete Schweinerassen und Alternative Schweinezüchtung*. Wetzlar: NZH Verlag.
- Hokkanen, Jyrki E. I. 1999. Visual Simulations, Artificial Animals and Virtual Ecosystems. *The Journal of Experimental Biology* 202 (23): 3477–3484.
- Magenat-Thalmann, Nadia; Thalmann, Daniel (eds.) 1994. *Artificial Life and Virtual Reality*. Chichester: Wiley.
- Mullins, Patricia 1992. *The Rocking Horse: A History of Moving Toy Horses*. London: New Cavendish Books.
- Ovid (Publius Ovidius Naso) 1992. *Metamorphoses/Metamorphosen*. Lateinisch-deutsch. Translated and edited by E. Rösch. 13th edition. München: Artemis and Winkler.
- Pesce, Mark 2000. Toy Stories. *The Sciences* (September/October): 25–31.
- Petermann, Christine and Schmauks, Dagmar 1999. Tomatoffel und die Folgen. *Zeitschrift für Semiotik* 21: 411.
- Pfeifer, Rolf (ed.) 1998. *From Animals to Animats 5: Proceedings of the Fifth International Conference on Simulation of Adaptive Behavior*. Cambridge MA: The MIT Press.
- Ranke-Graves, Robert von 1960. *Griechische Mythologie. Quellen und Deutung*. 2 volumes. Reinbek: Rowohlt.
- Reinach, Salomon 1922. *Répertoire des peintures Grecques et Romaines*. Paris: Leroux.
- Ricketts, Viva Leone 1969. *All About Toy Dogs: Their Care in Sickness and Health, Feeding, Training, Breeding and the History and Character of Each Breed*. London: Hale.

- Rötzer, Florian 2000. Künstliche Lebewesen. In: Deutsches Hygiene-Museum (ed.), *Gehirn und Denken. Kosmos im Kopf*. Ostfildern-Ruit: Hatje Cantz Verlag, 96–104.
- Schmauks, Dagmar 2000. Phantome, Prothesen, Servonen. Die Simulation von Körperteilen und -funktionen in sexuellen Szenarien. To appear in: *Proceedings of the 9th International Congress of the DGS* (Dresden 1999).
- Schmundt, Hilmar 2000. Das Kunst-Gen. *Der Spiegel* 26/2000: 114.
- Tu, Xiaoyuan 1996. *Artificial Animals for Computer Animation: Biomechanics, Locomotion, Perception, and Behavior*. Department of Computer Science, University of Toronto: Dissertation.

Плюшевые медведи, тамагучи, трансгенные мыши: семиотическая типология искусственных животных

Выражение “искусственное животное” обозначает очень разные объекты от плюшевых медведей до результатов генной инженерии. В качестве основы дальнейшего исследования в статье прежде всего даются основные интерпретации и прослеживаются их систематические взаимосвязи. Последующие разделы посвящены искусственным животным в контексте игры. Развитие материальных игрушек обеспечивается роботроникой. Она снабжает игрушки искусственными органами чувств, конечностями и когнитивными способностями, позволяя им действовать в реальном мире. Другая линия развития, тесно связанная с исследованием Искусственной Жизни, создает виртуальные существа, “живущие” на экране компьютера. Эти два варианта различаются прежде всего модальностями восприятия, которые включаются во взаимодействие: виртуальные существа можно видеть и слышать, тогда как материальные игрушки можно и потрогать. Поэтому симуляция чувствительности (*haptic qualities*) играет важную роль. Для полноты предлагаемой типологии дается набросок двух следующих областей исследования: искусственные животные вне игры и “искусственные животные во плоти”, живые, но проектируемые и созданные человеком. Изучение искусственных животных принадлежит к экосемиотике в широком смысле слова: они являются частями экосистем, которые сами могут быть виртуальными, как интернет.

Plüüškarud, tamagotchi, transgeensed hiired: tehisloomade semiootiline tüpoloogia

Väljend “tehisloom” tähistab vägagi erinevaid objekte plüüškarudest kuni geenitehnoloogia saavutusteni. Artiklis esitatakse kõigepealt “tehislooma” mõiste peamised tõlgendused, mis on aluseks edasisele arutlusele, ja vaadeldakse nende omavahelisi süstemaatilisi seoseid. Seejärel keskendutakse tehisloomadele mängu kontekstis. Materiaalsete mänguasjade arengu tagab robotroonika, mis varustab mänguasjad kunstlike tajuorganite, jäsemete ja kognitiivsete võimetega, võimaldades neil tegutseda reaalmaailmas. Teine arenguliin, mis on tihedalt seotud tehiselu uurimustega, loob virtuaalseid olendeid, mis “elavad” arvutiekraanil. Need kaks varianti erinevad eelkõige vastuvõtu modaalsuste poolest: virtuaalseid olendeid võib näha ja kuulda, aga materiaalseid mänguasju võib ka puudutada/kompida. Seetõttu osutub oluliseks puuetundlikkuse simulatsioon. Pakutava tüpoloogia täielikkuse huvides visandatakse kaks järgmist uurimisvaldkonda: tehisloomad väljaspool mängu ja “täisverelised tehisloomad” — elusad, kuid inimese poolt kujundatud ja loodud. Tehisloomade uurimine kuulub ökosemiootika valdkonda selle laias tähenduses, kuna nad on osa ökosüsteemidest, mis võivad ise olla ka virtuaalsed (nagu internet).

An introduction to phytosemiotics: Semiotic botany and vegetative sign systems

Kalevi Kull

Dept. of Semiotics, University of Tartu,
Tiigi St. 78, 50410 Tartu, Estonia¹
e-mail: kalevi@zbi.ee

Abstract. Asking, whether plants have semiosis, the article gives a review of the works on phytosemiotics, referring to the tradition in botany that has seen plants as non-mechanic systems. This approach can use the concept of biological need as the primary holistic process in living systems. Demonstrating the similarity between the need and semiosis, it is concluded that sign is a meronomic entity. A distinction between five levels of sign systems is proposed: cellular, vegetative, animal, linguistic, and cultural. Vegetative sign systems are those which are responsible for the morphogenesis and differentiation within an organism, thus belonging to all multicellular organisms.

Eine ganz ähnliche Stufenfolge ist in den Pflanzen, nur mit dem Unterschiede, daß die höhern Formen fehlen, wo die Zeugung unter dem Einflusse des Willens steht, weil der Wille und das gesammte animalische Leben den Pflanzen abgeht. Dagegen ist das Sprossen sehr gemein.

Karl Ernst von Baer (1864: 45)

Why phytosemiotics? The problem of semiotic threshold

The question — whether there is semiosis (a sign process) in plants, whether plants are ontologically semiotic systems — is a decisive question for biosemiotics. Because, if the answer is negative, there will be no reason to progress further from zoosemiotics, there will be

¹ Also: Institute of Zoology and Botany, Riia St. 181, 51014 Tartu, Estonia.

no need to extend the study of sign systems to the whole living world, to all of biology, as biosemiotics has set out to do.²

In his book *A Theory of Semiotics*, U. Eco has formulated the problem of semiotic threshold: 'By *natural boundaries* I mean principally those beyond which a semiotic approach cannot go; for there is non-semiotic territory since there are phenomena that cannot be taken as sign-functions' (Eco 1979: 6). At that time, Eco was quite certain about where this threshold is situated.³ He has stated: 'One must undoubtedly exclude from semiotic consideration neurophysiological and genetic phenomena, as well as the circulation of the blood or the activity of the lungs' (Eco 1979: 21).

However, few years later, a group of six leading semioticians published a collective work in which they argued for the placement of the semiotic threshold at the boundary of life (Anderson *et al.* 1984). Accordingly, the whole of biology was included into the semiotic realm.

Since then, research on biological sign processes has been growing quickly (for a review, see Kull 1999). Within the last two decades of the development of biosemiotics, it became widely accepted that the semiotic approach is an appropriate tool to describe all living systems, down to the first cells. There are many works in which the semiotic phenomena of the cellular level are analysed (Emmeche 1998, Hoffmeyer 2000, Kawade 1996, Pollack 1994). Quite naturally, semiotics of plants, or phytosemiotics,⁴ would be a part of this enterprise.

In many semiotic reviews, the existence of phytosemiotics is only mentioned, without real attempts to describe the theoretical models it can propose. For instance, W. Nöth (1990: 147) has remarked (although, over a decade ago): 'Whereas there has hardly ever been any doubt about the existence of signs in the animal kingdom, the assumption of semiosis in the sphere of plants, defended by the proponents of a new branch of semiotics called *phytosemiotics*, is still controversial'.

If, in the first edition of his *Handbook*, W. Nöth still hesitates to speak about phytosemiotics, then, in the second edition, he has already included a paragraph 'Exkurs zur Phytosemiotik' (Nöth 2000: 258–259), to reflect the recent developments in biosemiotics. Also, when writing about *ecosemiotics*, he states that 'dieses Gebiet der Semiotik

² On the biosemiotic program of research, see, e.g., Sebeok 1997, Hoffmeyer 1997, Kull 1992, 1999, Emmeche 1998, Sharov 1999, Wuketits 1998.

³ See also the paper by W. Nöth in the current volume.

⁴ For instance, V. Colapietro (1993: 160) has defined it namely like this, very briefly: phytosemiotics is 'the semiotics of plants'.

überschneidet sich mit der Kultursemiotik, der Biosemiotik einschließlich der Phytosemiotik und der bisher nur ansatzweise existierenden Physikosemiotik' (Nöth 2000: 250). In another work, Nöth (1994: 51–52) writes about 'spatial opposition in phytosemiosis'.

Since plants and animals do not cover all the non-human living world, it has naturally been asked whether we need additional terms for fungi, protists, and bacteria. 'If the phytosemiotic sluice was opened, the argument ran, there would be no end to new semiotics — e.g., mycosemiotics, cytosemiotics, and so on' (Krampen 1992: 213). Indeed, T. A. Sebeok (1997) has argued for using the corresponding terms for each of the five kingdoms of life. Accordingly, reviews now exist about semiosis in unicellular organisms (Yates 1997) and fungi (Kraepelin 1997), in addition to the ones about animal semiosis.

Beside the problem of semiotic threshold (i.e., the question, on which side of the boundary plants belong), we, therefore, face, here, the next problem. This is the question, whether there may be anything special in plant semiosis in order to justify its distinction from the other fields of biosemiotics (i.e., the problem of distinction between semiotics of different kingdoms).

It may be necessary to stress that under phytosemiotics we do not mean the semiotics of botanical research, neither the existence of plants as signs in human communicative systems (the latter would still be a part of *ecosemiotics*, cf. Kull 1998, Nöth 1998; see also Krampen 1989)⁵, neither we will argue for any psychic phenomena in plants (cf. Nagel 1997). Our subject is confined to the question of the existence of (primitive) sign processes in plants. *Phytosemiotics is the study of semiosis in the realm of plants*. Also, we would like to exclude, here, the mechanisms which are general to almost all cells, and would like to focus on the semiotic phenomena which are specific to plants.

We use, here, the contemporary division of plants, according to which the kingdom *Plantae* includes only multicellular organisms with cellulose cell walls (i.e., all bryophytes and vascular plants). Most algae belong to the kingdom *Protista* (except the blue-green ones, which belong to *Bacteria*).

Thus, we ask in this paper, whether the formulation of phytosemiotics is justified, whether the inclusion of botany into semiotics is well grounded. In order to do so, first, we will give a review of the existing

⁵ For an ecosemiotic analysis of plants in human environment, including plant symbolism etc., see, for instance, Schmauks 1997, Schempp *et al.* 1997, Broek 1997.

literature about phytosemiotics, and second, we will try to sketch some of the characteristics of its principal theoretical framework.⁶

Twenty years of the term: Martin Krampen's phytosemiotic work

In 1981, the paper 'Phytosemiotics' by Martin Krampen, which coined the term *phytosemiotics* and argued for its rights to exist, was published in *Semiotica* (Krampen 1981). This paper has been reprinted (with few changes, Krampen 1986a) and very often referred to. Later, Krampen has published several new versions of this paper (Krampen 1986b, 1997a) and a few analyses of some particular aspects of his approach (Krampen 1992, 2001), in addition to his writings on various ecosemiotic aspects of plants (Krampen 1994) and the usage of plants in architecture (Schempp *et al.* 1997).

Krampen has described the appearance of his view on the semiotics of plants as follows:

The establishment of phytosemiotics as a specific field of inquiry grew out of my in-depth study of Jakob von Uexküll's 'Theory of Meaning',⁷ which asserts that living beings down to the cell are 'autonomous' in their acceptance or refusal of signs from outside them, that there is a semiotic correspondence between the living organism and its specific surrounds (*Umwelt*), and that there is such a correspondence between the specific surrounds of different living beings according to a 'plan of nature'. (Krampen 1992: 213)

In his 1981 paper Krampen gives a brief review of Uexküll's biosemiotics and an analysis of Uexküll's view on the distinctive features of plants. He agrees with most of Uexküll's statements (e.g., the absence of effectors and receptors in plants, absence of a functional cycle, casing instead of *Umwelt*, meaning factors instead of meaning carriers). Krampen refers to the recent work on plant receptors and plant hormones, but tends to conclude that 'I would [...] like to maintain Jakob von Uexküll's conception denying plants the capacity of specialized receptor organs, and rather apply to what are called receptors in the [...] literature the term 'sensors', according to the parlance of cybernetics with respect to feedback cycles' (Krampen 1981: 194).

⁶ I want to thank Dagmar Schmauks and Winfried Nöth for drawing my attention to few interesting papers.

⁷ Uexküll 1940.

Krampen also describes a few examples of animal-plant relationships, including the plant defence mechanisms against herbivores (Krampen 1981: 203–204).

The other topics in Krampen's paper mainly concern human relationships to plants — an area which does not say much about semiosis in plants themselves and would, thus, belong to ecosemiotics. He also provides quantitative data on the influence of plant gas exchange on the dynamics of oxygen concentration in a greenhouse, interpreting this in the context of plants' meaning for humans.

An interesting additional point made by Krampen states that plants' signs are indexes, animal ones icons, and human ones symbols: 'in plants, indexicality certainly predominates over iconicity. [...] Indexicality, on the vegetative level, corresponds to the sensing and regulating, in a feedback cycle, of meaningful stimulation directly contiguous to the form of the plant' (Krampen 1981: 195–196).

In the later versions of this paper, Krampen has added a few examples, e.g. on mimicry in plants (Krampen 1997a: 518), an apparently active defence by plants by sending chemical messages (Krampen 1997a: 517), on plant semiochemicals which attract the parasite hosts of the attacking caterpillars (Krampen 1992: 215), etc. The ecosemiotic part, i.e. the analysis of human-plant relationships, has also been developed. In a recent paper (Krampen 2001) the relationship between autotrophs and heterotrophs via oxygen and carbon dioxide has been given a semiotic interpretation.

The main point of Krampen's approach is formulated in his 'phytosemiotic hypothesis': 'while plants are autonomous living beings [...], their semiosis is different from that of human and animal subjects in such a way that it merits its own semiotic analysis' (Krampen 1981: 191–192). He also admits that 'the difficulty of this enterprise is to avoid anthropomorphizing the behavior of plants and to adopt, as an observer, the correct "phytcentric" perspective' (Krampen 1986b: 729).

Jakob von Uexküll's statements about plants

Jakob von Uexküll has written quite little about plants. In his *Theoretische Biologie* (Uexküll 1928) plants are almost not mentioned. However, in his late work (Uexküll 1940) he attempts to include plants in his consideration, in order to reach his fundamental conclusion: 'The

question of meaning is, therefore, the crucial one to all living beings' (Uexküll 1982: 37). Below are a few statements about plants from this study.

Both animals and plants build living houses for themselves, i.e. their bodies, with whose help they lead their existence. [...] The plant has no nervous system, receptors, or effectors; therefore, no meaning-carriers, functional circle, perceptual, or effector cues exist for the plant. [...] The houses of plants lack mobility. Because they possess neither receptor nor effector organs, plants are not able to construct and be in command of an Umwelt.

The plant possesses no special Umwelt organs, but is immersed directly in its habitat. The relationships of the plant with its habitat are altogether different from those of the animals with their Umwelten. The building-plans of animals and plants are the same in only one respect. Both select precisely from among the stimuli that impinge upon them from the environment. (Uexküll 1982: 33)

Although plants may not have Umwelt, their relationship to the habitat is nevertheless different from the one of non-living things — it uses meaning. Thus, in the place of Umwelt, Uexküll uses the word *Wohnhülle* for plants.

Essential [lebenswichtige] stimuli also exist for plants; they emerge as meaning-factors out of all of those that impinge upon them from all sides. The plant encounters these stimuli, not with the help of receptor or effector organs, but because it has a living cell-layer that enables it to make its choice of stimuli from the dwelling-integument [Wohnhülle].⁸ (Uexküll 1982: 34)

According to Uexküll, plants can utilise meaning via their form.

In the case of a plant, one cannot speak of functional circles. However, the meaning of the plant's organs (which also consist of living cells) lies in the utilization of the meaning-factors of its dwelling-integument [Wohnhülle]. It masters this task due to its shape, built according to a plan, and the exquisite organization of its components. (Uexküll 1982: 36)

He also gives few examples.

[...] the shapes of the plants and trees are adapted to the meaning-factor, wind, which they use in various ways to disperse their seed. [...] The rain is caught in the gutters of the tree-leaves, and is guided to the delicate root-ends under the earth. The sunlight is caught by the chlorophyll-

⁸ The translation of the last sentence, here, is slightly different from the one of 1982; cf. Uexküll 1940: 10.

containing cells of the plant and is used for carrying out an intricate chemical process. The chlorophyll is not synthesized by the sun, nor is the gutter the product of the rain. (Uexküll 1982: 37)

The example of the form of tree foliage which directs rainfall towards the root tips is the one that Uexküll uses also in several other instances (Uexküll 1982: 49–51, 53).

Plants in other biosemiotic studies

As an important part of biology, botany should also have been included as subject matter in other works in the field of biosemiotics. However, plants, despite being most remarkable and common biotic components, have appeared very seldom as examples on the pages of these treatises.

John Deely, who has commented Krampen's paper in several of his writings (Deely 1986, 1990), has coined the term *physiosemissis* to denote the role of semiosis in evolution in general, including the non-living world, 'whereby the physical interaction of existing things is channelled toward a future different from what obtains at the time of the affected interaction' (Deely 1990: 30). When speaking about plants, he emphasises an old tradition of thought according to which 'the life of plant exists within the animal itself precisely as base and part of its proper life' (Deely 1990: 97). Still, he hesitates to assign plants an ability of actual semiosis.

Rich as are the results of this method in Krampen's hands, I am not convinced that they succeed in establishing phytosemiotics on an equal footing. Or, to put it another way, I am not convinced that the communication among plants and between plants and the physical environment and the communication between plants and animals is, on the side of the plants themselves, fully an actual process of semiosis, such as it certainly is on the side of the animals. (Deely 1990: 98–99)

Deely also says that 'from Krampen's work I am convinced of phytosemiotics, but not of physiosemissis' (Deely 1986: 103). This view is connected to 'a distinction between communication, which is virtually semiotic, and actual signification proper' (Deely 1990: 99). According to Deely (1990: 99), virtual semiotic phenomena involve thirdness latently, and he includes, here, endosemiotic, physiological and tropic phenomena, calling them all vegetative.

Few interesting points are added by Thure von Uexküll (1986: 211), who says about vegetative signs that 'they are not signs for occurrences outside the plants, as there is no "outside" for vegetative systems.' He also writes:

Plants are solipsistic systems. Since they do not know about objects there is no point of describing them as subjects. They are only able to distinguish 'self' and 'nonself'. The signs which enable them to do this are iconic signs, i.e. perceptual signs for a decrease, operational signs for an increase of the similarity to 'self'. [...]

These facts also apply to the systems within our body. Cells are solipsistic systems as well, and endosemiotic signs are iconic signs of such systems. (T. v. Uexküll 1986: 211)

Jesper Hoffmeyer, in all his biosemiotic writings, has said remarkably little about plants (except for a few comments on *Wohnhülle* on the basis of Uexküll 1940, and references to some of Krampen's examples). However, he has argued for the existence of semiosis in cells, and, using the writing of A. Rayner (1997), has attempted to prove that fungi have semiosis (Hoffmeyer 2000).

I want to emphasise, here, a surprising controversy. Namely, when most authors, including Uexküll himself, state that plants have no Umwelt, they, at the same time, can attribute an Umwelt to some unicellular organisms. For instance, Uexküll describes the Umwelt of *Paramecium*, (Uexküll 1992: 342), and the Umwelt and *Umwelttunnel* of a parasitic microbe *Plasmodium vivax* (Uexküll 1922), unicellular organisms which both belong to the kingdom *Protista*.

The basic reason why it seems easy to speak about the Umwelt of unicellulars is evidently the distinguishability of their receptors and effectors. They have membrane receptors, and a flagella or cilia for moving their body. And even in the case when a cell cannot actively move, it has several other means to operate, for instance a mechanism for excretion. But the latter may also exist in plant cells. If so, then we can conclude that at least plant cells may have Umwelt. And if their cells have it, why not the organism as a whole?

Accordingly, we are reaching a hypothesis that the reason why plant Umwelt has usually been denied is because these authors have not studied plants in all the necessary detail.⁹ It may, thus, still be that plants possess an Umwelt, although a different kind.

⁹ Indeed, the authors cited (J. v. Uexküll, M. Krampen, J. Hoffmeyer) are not botanists.

The problem is difficult not only for semiotics but also for biology. Ethology, the study of organisms' behaviour, only quite seldom devotes a chapter to the behaviour of plants. Neither has cognitive ecology (Real 1993) spoken about plants.

Vegetative sign systems: Semiotic phenomena in the botanical field

Krampen (1997a: 511) writes: 'What plants do have in any event are feedback cycles connecting sensors and regulators'. And he adds: 'Whether these processes satisfy Tembrock's (1975) strict definition, requiring a function cycle and signalling systems, is still too early to say. Phytosemiotics should one day be able to answer this question' (Krampen 1997a: 517). Thus, the question seems to converge very much in the precise definition of functional cycle. Still, most biosemioticians agree that Uexküll's (1992: 320–321) famous example about the behaviour of a tick represents a functional cycle. If this very simple reaction chain of a tick can be considered to be semiotic, then a plant ecophysiologicalist may evidently propose many examples of comparable complexity from his field. Below, we list a few common phenomena in plants that may be interpreted as functional cycles or their necessary components.

Plant movements

The statement that animals move and plants do not is scientifically incorrect. It is well-known that many plants can move their flowers or leaves towards a source of light, they can open and close their flowers, they move tendrils, the shoot and root apices can turn if the gravitational field changes direction, etc. However, there is also an important difference between the movement of plants and animals, and, thus, a more correct statement says: most animals possess organs which can move the whole body, whereas plants cannot actively move the whole organism (except through growth) and may move actively only some of their parts. Thus, what is lacking in plants is not an active movement, but an active locomotion over distances (cf. Krampen 1997a: 511).

Darwin has written a large work about plant movements (Darwin 1865). He has also picked up some profound similarities between animal and plant movements:

When the nerves and muscles of an animal are excited by galvanism or by the absorption of strychnine, the consequent movements may be called an incidental result, for the nerves and muscles have not been rendered specially sensitive to these stimuli. So with plants it appears that, from having the power of movement in obedience to certain stimuli, they are excited in an incidental manner by a touch, or by being shaken. Hence there is no great difficulty in admitting that in the case of leaf-climbers and tendril-bearers, it is this tendency which has been taken advantage of and increased through natural selection. (Darwin 1872: 178)

However, Darwin's main interest concerned the explanation of the evolutionary origin of these phenomena, and not the dissection of their proper mechanism.

Plant and animal movements differ remarkably in time scale. Plants are usually very slow in their reactions. This may be a reason why the behaviour of plant organisms cannot usually be recognised as meaningful *per se*. Thus, in order to make the plants' reactions recognisable to the human eye, one has to use speed photography, for example (cf. the emphasis made by Uexküll (1928) on the importance of cinematography for behavioural research).

According to the relationships to the source of excitation, the organ movements have been classified as tropic, nastic, and autonomic movements. In the case of tropisms, the movement depends on the direction of the signal, whereas the nastic movements are independent of the direction of the excitant. Autonomic movements do not require any external signal.¹⁰

An encyclopedic work by Haupt and Feinleib (1979) provides many examples of plant movement, also demonstrating, for example, the data which shows the availability of actomyosin in plant cells and the mechanism of contractile motor cells in *Mimosa*.

Thus, many cases are known where plant organs present an active movement which is coordinated with the whole life process of the individual. And 'a careful reconsideration of plant mobility might lead

¹⁰ The terminology of *tropisms* was developed particularly by Jacques Loeb, who distinguished between chemo-, helio-, geo-, etc. tropisms. Uexküll (1936) strongly criticized Loeb's approach, because the latter seemed to claim that the factors of movement are situated in the environment and not in the organism itself.

to the hypothesis that there could be more to information seeking in plants than hitherto believed' (Krampen 1997a: 508).

Plant receptors and effectors: Recognition in plants

There exist many examples of mechanisms in plants where certain external signals are recognised by specialised cells or other plant structures, followed by a reaction chain that leads to an adaptive response in the same, or sometimes in another, organ of the plant. Here belongs, for instance, graviperception, which regulates the direction of growth in shoot and root tips (Volkman, Sievers 1979). Another example can be the adaptive formation of reaction-wood as a result of changes in mechanical tension in root or shoot tissues (Wilson, Archer 1977). The third example may be the release of abscisic acid in roots in drying soil, which leads to stomatal closure and thus saves the plant from desiccation (Davies, Zhang 1991). There also exist photoreceptors, which are different from chlorophyll, reacting to certain light parameters and regulating plant differentiation.

Let us consider the following experiment with a seedling growing in complete darkness (on the resources either taken from the seed or mycotrophically from fungi). Due to gravitropism its shoot grows vertically. Let the pot with the seedling be covered by a cap which has two holes in it, both at some angle from the shoot. From one of these holes, we will give a low intensity radiation of a frequency that cannot be used for photosynthesis. The result may be that the shoot turns and grows through the irradiated hole. This experiment can be interpreted as demonstrating the adaptive response of a plant, where the plant uses the radiation of one kind as a sign for a possible light source suitable for photosynthesis. It demonstrates that the seedling is able to choose the direction of growth.

Thus, plants have selectively reacting structures that forward the signal to target mechanisms for a co-ordinated response.

Intercellular communication: cellular recognition and functional differentiation

In bacteria and protists, it is a common phenomenon that in natural conditions a new organism can develop in full from a single cell that

is totally separated from any other cell of that kind of organism. In fungi, this also occurs, e.g. via conidia — the unicellular forms of vegetative reproduction. From conidia new mycelium can develop, which will form its own conidia, and so *ad infinitum*. In animals, this is not possible in natural conditions — in order to develop into a multicellular organism, a cell must have some communication with some other cells of its kind. In laboratory conditions the development of an organism from a single separated cell can be achieved, but this means that the natural communicative signals required for this in natural conditions will be replaced by artificial ones specially created in the growth media by the researcher. All vascular plants are, in this respect, similar to animals. However, in bryophytes it is possible that a new plant develops from a separated single-cell spore. This new plant can then reproduce vegetatively, via multicellular means, but it cannot produce new spores, and thus the full life cycle cannot occur. Thus, *in all plants (as well as in all animals), the permanence of the intercellular communication system is an obligatory requirement for the life cycle to run*. In most other large taxa this is not the case, since there exist many examples from the kingdoms of bacteria, protists, and fungi, where the intercellular communication system can be recreated anew, in natural conditions, from a single separate cell.

The role of intercellular communication concerns very much the overall regulation of growth and reproduction in most organisms. For instance, in the apical meristems of plants, the intercellular connections are considerably reduced in comparison to most differentiated tissues. Similarly, unlimited or malignant growth in animal tissues often occurs when the intercellular contacts (e.g., the cell-to-cell recognition mechanisms) are not working. Thus, *decontextualisation is often related to the loss of growth control* (Kull 1998: 353).

Differentiation, the formation of different types of cells in a tissue or a cell population, as a rule, is a result of certain communication mechanisms. If these do not work, the differentiation cannot take place.

Inter-organismal communicative structures: sexual recognition and symbiosis

Plants do have sex and sexual organs. This means that male and female gametes have to find and specifically recognise each other. If the gametes belong to different individuals — which is frequent in

plants — the result will be biparental reproduction, and, consequently, the individuals categorise themselves into biological species. It has been demonstrated earlier that categorisation on the basis of selective recognition can be interpreted as a general phenomenon in semiotic systems (Kull 1992, 1993). Communication is responsible for the emergence of certain spatial or temporal structures — communicative structures — among which the biological species is one example.

It can be seen, particularly among plants, that there may also exist such taxa (i.e., of the above-species rank, usually of the level ‘subgenera’) that do not include any biological species. These are the cases where biparental reproduction has been lost (e.g., in *Hieracium*). Among animals, no good examples of this kind are known.

Among the communicative relationships between the specimens of different species, the most well-known examples belong to symbiotic or parasitic relationships. These exist between different plant species (e.g., between *Cuscuta* and *Urtica*), but even more widespread are those between plants and fungi (e.g., mycorrhiza) or plants and bacteria (e.g., *Trifolium* and *Rhizobium*). The statement that every symbiosis represents a semiosis has been repeatedly expressed in biosemiotic literature (see for instance Anderson *et al.* 1984, Kull 1999b).

Plant-animal relationships have seemingly been the area most often used for finding examples of communication-like phenomena in plants. This especially concerns plant pollination mechanisms, which show a great variety of fascinating forms. Darwin has studied several examples of plant-animal relationships, particularly those related to pollination by insects and the behaviour of insectivorous plants (Darwin 1875, 1984). He has pointed out the richness in plant forms, which is comparable to that of animals, e.g., in his book about orchids (Darwin 1984: 1): ‘The object of the following work is to show that the contrivances by which Orchids are fertilised, are as varied and almost as perfect as any of the most beautiful adaptations in the animal kingdom.’

Mimicry in plants

Mimicry is one of those rare phenomena which have been counted as semiotic even by those researchers who generally do not accept that biosphere may be included into the semiotic sphere (cf. Maran 1999). The reason for this comes from the apparent and evident deception process that is the core of mimicry. However, most of the impressive

examples of mimicry come from the animal kingdom. If a plant is involved in a mimicry situation, then it may not be clear whether the whole adaptive evolution could not be attributed only to the animal partner. Still, there are several examples, described, which are hard to interpret without an active adaptation from the side of the plant (for a review, see Wickler 1968, Wiens 1978, Komárek 1998: 279–283).

‘The meaning-utilisation by form’ reconsidered

One of the interpretations of Uexküll’s example of the oak-tree and rain is as follows:

To put it in the common semiotic terminology: the leaf’s [actually, the crown’s — K. K.] form is the interpretant and the physical behavior of the raindrop [or rain] is the signifier. The code coupling leaf and raindrop [or, tree crown and rainfall] is the oak tree’s need of liquid for transporting nourishing salts into its cells. (Krampen 1997a: 512)

If this situation is viewed in detail, one may notice that the growth of roots depends on the distribution of water in the soil. If the moisture conditions are more suitable in the region of the crown’s edge projection on the ground, then this will also be the region of maximum density of fine roots, due to the sensitivity of roots to moisture. Therefore, what we have here is an example of a functional cycle, where the shortage of water leads to root elongation, until the roots reach the site with sufficient moisture. Further on, the same roots supply the leaves with water, and the crown can grow in diameter only if the roots have reached the suitable spatial distribution. Thus, indeed, the correspondence between the spatial placement of leaves and roots will be achieved due to a functional relationship that has originated from a specific biological need.

Biological needs, vegetative needs, and semiosis

A basic problem that still remains is: what makes the phenomena, described above, different from usual physical feedback mechanisms. Why it is not sufficient to apply a (bio)physical description to them, why do we in addition need a semiotic one?

Limiting myself to referring to the studies which argue for the holistic features of living processes (Elsasser 1998, Rosen 1991) or de-

scribe in detail the characteristics of biological semiosis (Emmeche 1998, Hoffmeyer 2000, Sharov 1999), I will further analyse here the notion of *biological need*.

Life starts with needs. An existence of needs can be taken as a distinctive characteristic of living systems. If all the needs of an organism or its cells are removed, it will become a dead body.

Despite of its wide usage in biological literature, biologists lack a scientific definition of *biological need*. In order to go on in the discussion, I define this notion, here, using semi-cybernetic terminology: *a need is an expected input which regulates the output until the input reaches what it has expected*. Thus, need is a situation when lack of something regulates operation for its sake.

This corresponds nicely to the explanation of the word *need* given, e.g., in the Webster's Dictionary. *Need* is defined simultaneously as (1) something necessary, useful, or desirable, and as (2) a lack of something necessary, useful, or desirable.

A stone does not have needs. When we say that a car needs petrol in order to move, then this is not the car itself which needs petrol, but the petrol is needed due to a human who wants to drive. However, plants themselves need light in order to assimilate carbon dioxide and grow.

Need is not just a feedback, in the same way that functional cycle is not just a feedback. In the case of functional cycle, the output is not deterministically caused by input; the input is related to that particular output due to the 'input expected'. The lack of expected input is related to certain output because it *stands for* the expected input.¹¹ Thus the functional cycle is rather feed-forward, in the sense of Robert Rosen.

What distinguishes an action of physical cause from an action of sign, is that in the latter the effect that follows is not due to this cause, but is only explainable through something it stands for. In this way we can see the similarity between semiosis and the process of need.

¹¹ One may ask whether there exist any 'unexpected inputs' for an organism? The answer is, certainly — yes. All those factors, for which an organism has no system of recognition or perception, i.e. which cannot be recognised by the organism, are in this sense 'unexpected'. This may be a sound for a deaf, or X-rays for an animal. The boundary between the 'expected' and 'unexpected' in this sense coincides with the boundary of Umwelt and non-Umwelt in the sense of Uexküll. On the other hand, the 'unexpected' input also can change the organism's behaviour, like in the case of damage caused by X-rays. Therefore, for an observer, a resulting change in behaviour cannot be a sufficient criterion for the distinction between the 'expected' and 'unexpected' inputs. Cf. also Barham 2000: 16.

Still, a few other conditions need to be fulfilled in order to constitute a sign relation, or a need. First, one and the same factor has to be able to cause several different effects in the same system. Otherwise it is simply a physical factor, and cannot be a sign vehicle. And second, several different factors have to be able to lead to one and the same effect in the system. Otherwise one of the factors cannot stand for something else. Thus, the relation, or mapping, between the factor and effect has to be both one-to-many and many-to-one, in order to make a sign relation possible.¹²

And yet this is not enough. There should also be a memory. Memory means a capacity to store and to forget. That is, it should be possible that a current effect has an influence on an effect which will take place later, as a result of the same factors. If so, then we have the necessary conditions for a learning event to take place. It is a secondary problem, here, whether the memory is realised as a genetic, or epigenetic, or a neural one.

If life is just the operation of needs, then it might be possible to view biology as an analysis of needs.

A feedback in a mechanistic homeostat is a deterministic cycle. When a need appears, it will be indeterminate (cf. the discussion about the indeterminacy in Hoffmeyer 2000). During the formation of a sign, or a need, the connection between the input and output becomes canalized. But despite canalization, the potential multitude remains, and this enables the search to occur. A potential to make a search, or to seek, is evidently a general feature of functional cycles.

Thus, the organic forces are needs. And certain basic needs are those that descend. Biological evolution (as well as development), consequently, can be viewed as the differentiation of needs.

Need is also a holistic feature, being something emergent. The holistic behaviour of need follows also from its mapping relation, as described above. Differentiation of needs, therefore, is like differentiation of a whole into parts. Needs are characterised, usually, as biological functions.¹³ Thus, when a function is differentiating, then the functional connection does not disappear. And if this is true, then the functional connection can be kept even, for instance, in the differen-

¹² One can notice that these conditions are fulfilled for enzyme systems, as well as for neural nets.

¹³ This corresponds well to the functional explanation of biological traits via *viability explanation*. 'Viability explanations relate traits of organisms and their environments in terms of what an individual needs' (Wouters 1995: 435).

tiation of organisms into autotrophs and heterotrophs. This is Krampen's last example about the connectedness between plants and animals via mutual supply.

From the identification between needs and signs, or the need process and semiosis, as we have argued above, we now receive a fascinating statement: *sign is always a part — a meron*.

If so, then we can draw a line from a biological need to all possible types of signs, and also say that biological purpose originates from vegetative needs.¹⁴

When Deely (1990) finds that the most general phenomenon related to semiosis of any kind is evolution, I would argue that evolution, as a temporal change, may also occur without the involvement of any semiosis, as it appears in the evolution of stars or many other non-living dynamic systems, or in certain cases probably also in the evolutionary changes of living systems. A more appropriate candidate for a generally semiotic process may be a need, as it occurs in all organisms, beginning from cells.

Following the definition of need, above, one can hypothesise that the principal difference between plants and animals, in the functional aspect, has something to do with the form of expected input. In case of animals, these are usually much more complex, due to the integrating power of nervous system. For instance, it is probably unthinkable that the expected input may be temporally structured in the case of plants, whereas it often is so for animal perceptual signs.

Meronomy of signs and needs

Classification can be carried out in two ways. If we classify independent objects, we carry out taxonomy, and get taxa. But if we classify parts of a whole, this is meronomy, where we make a distinction between merons. Thus, in the case of the classification of sign vehicles, we have taxonomy, whereas when classifying signs as components of

¹⁴ One can see here certain similarity to some statements of the botanist and geneticist E. Sinnott (1950), who has argued that there seems to be in every living organism a sense of its inner subjective relation to its bodily organization that guides and controls vital activities towards specific ends. In other words, "the pattern or tension set up in protoplasm, which so sensitively regulates its growth and behaviour, can also be experienced, and this is the genesis of desire, purpose, and all other mental activities" (Sinnott 1950: 48).

a sign system, we have to carry out meronymy (Meyen 1977, 1990, Schreider 1983).

Taxonomic classifications are based on various similarity relations. Context may have only secondary importance in taxonomy. Meronomic classification describes the functional differentiation of a system. Context cannot be broken in merons, because, through this, the relationship with the whole is kept.

'A difference that makes a difference' is a well-known definition of information by Gregory Bateson, but this is also the basis of any functional classification. Meaningful information is always 'a part of'. This is exactly the difference between structural and meaningful information. If there is no part-whole relation, there is no meaning. Still, without any ontological part-whole relationship, the measurement of structural information is applicable.

Meaning is made by part-whole relations, and, therefore, semiotics is meronymy. There is no signification without functional differentiation.

What is said here about sign, also belongs to the concept of need.

Typology of sign systems: Vegetative sign systems

A problem that semiotic biology faces from the very beginning is terminological. Starting, e.g., with the process-structure dichotomy, the biology of the last half century is not well fitted to the holistic understanding of its objects.

Until the beginning of the 20th century, the distinction between vegetative, animal, and intellectual phenomena was well accepted in biology. The analysis of instinct, as different from both vegetative and intellectual aspects of life, constituted a developed part of scientific discourse and of the professional biological intuition. However, since this distinction has not been supported by corresponding principal classes of biological mechanisms, it disappeared, step by step, from the textbooks and biological theory. Another reason for this change is seemingly connected to the fall of the teleological view that has largely served as a basis for that approach.

There has been a well-known debate about the concepts of primary and secondary modelling systems. According to the initial formulation by Lotman, language is the primary modelling system, whereas culture comprises the secondary one. Later, Sebeok has argued that there

exists a zoosemiotic system which has to be called the primary one, leaving the secondary status to language, and the tertiary one to culture (e.g., Sebeok 1994). Sebeok's view has been supported by many later authors (cf. Moriarty 1994).

Now, speaking about the sign systems in plants, we are facing the problem of the inappropriacy of this classification again, due to the great differences between animal and vegetative signs.

It is seemingly appropriate to distinguish between sign systems and modelling systems. The modelling relation assumes an ability to imitate. Plants cannot imitate. But what plants have is a readiness toward certain events in their surroundings. Considering, as stated above, that plants do use signs, we are reaching a new classification, which is different for sign systems and modelling systems.

Thus, we can distinguish between five levels of sign systems.

1) Cellular sign systems. This is the sign system of any bacterial cell. Its characteristic processes are enzymatic recognition and membrane reactions. Its inheritance system combines the epigenetic and genetic. Described, e.g., by T. v. Uexküll (1985: 104–106); cell has no Umwelt, but dwelling integument (*Wohnhülle*). It is characterised by microsemiosis. According to Yates (1997: 458), microsemiosis 'does not address communication between cells or among cell complexes'.

2) Vegetative sign systems. This includes the communication between the tissues in multicellular organism. It is the system that is responsible for the genesis of multicellular biological form, the whole morphology of the body. The basic inheritance system here is epigenetic. Morphogenesis and cell differentiation are its typical representatives. In this sense, vegetative sign systems are not confined to plants — they may occur in all multicellular organisms.

3) Animal sign systems. This is the senso-neuro-muscular system, the one that is responsible for the behaviour of a motile animal organism. The basic inheritance system, here, is neuro-humoral (or behavioural, according to Jablonka *et al.* 1998). Its characteristic feature is the existence of complex Umwelt.

4) Linguistic sign systems. This corresponds to the primary modelling system (natural language), according to Lotman (or secondary modelling systems, by Sebeok 1994). Differently to the animal sign system, it has syntactic signs (Bickerton 1990), and is principally symbolic (Deacon 1997). Its characteristic feature is the existence of symbolic language.

5) Cultural sign systems. This corresponds to the secondary modelling systems, according to Lotman (or tertiary modelling systems, according to Sebeok 1994). Their characteristic features include the existence of artistic, ideological, ethical, etc. structures.

This, or similar, type of hierarchy has, of course, been proposed earlier, many times. Here, the distinctive aspect and emphasis is placed on the basic differences in semiotic features and characteristics of these levels.

A history of this typology goes back, for instance, to the classical distinction between *anima vegetativa*, *anima sensitiva*, and *anima rationale*. Already the doctrine of Thomas Aquinas included a view that in the first stage of embryonic development, the vital principle has merely vegetative powers; then a sensitive soul comes into being, educed from the evolving potencies of the organism — later yet, this is replaced by the perfect rational soul, which is essentially immaterial and so postulates a special creative act (cf. Ingensiep 1999). Thus, this whole story about the semiotic phenomena of plants is very much reminiscent of an old discussion, where the schoolmen assign some sort of soul, an *anima vegetativa*, to plants, whereas others have thought that soul goes no further than consciousness.

Conclusion

Certainly, there are many other phenomena, in plants, which can be treated as the semiotic ones. The aim of this work was to describe few better-known examples, in order to demonstrate the existence of semiosis in plants, and accordingly, to argue for botany as a semiotic discipline. The living process, which is interconnected via needs, so much as it requires wholeness, has to be treated holistically. However, this is only one side of the coin. The extension of the concept of semiosis over biology requires, simultaneously, a clear understanding of differences between the types of semiosis.¹⁵ Only then, theoretical botany cannot be developed for long without taking into account the fundamental semioticity of its major subject. And this may lead to a better understanding of what is sign.

¹⁵ In this, the arguments for vegetative semiosis differ from the statements, for instance, about the 'Intelligenz der Blumen' (Maeterlinck 1907), or the equality of life and cognition (Heschl 1990).

References

- Anderson, Myrdene; Deely, John; Krampen, Martin; Ransdell, Joseph; Sebeok, Thomas A.; Uexküll, Thure von 1984. A semiotic perspective on the sciences: Steps toward a new paradigm. *Semiotica* 52(1/2): 7–47.
- Baer, Karl Ernst von 1864. Das allgemeinste Gesetz der Natur in aller Entwicklung. In: Baer, Karl Ernst von, *Reden gehalten in wissenschaftlichen Versammlungen und kleinere Aufsätze vermischten Inhalts*. Erster Theil. St. Petersburg: H. Schmitzdorff, 35–74.
- Barham, James 2000. Biofunctional realism and the problem of teleology. *Evolution and Cognition* 6(1): 2–34.
- Bickerton, Derek 1990. *Language and Species*. Chicago: The University of Chicago Press.
- Broek, Gerard J. van den 1997. Flowers but no fruit: The vast land of unsemiotized culture. *Semiotica* 113(3/4).
- Colapietro, Vincent M. 1993. *Glossary of Semiotics*. New York: Paragon House.
- Darwin, Charles 1865. On the movement and habits of climbing plants. *Journal of the Linnaean Society of London (Botany)* 9: 1–118. [2nd ed. 1875.]
- 1872. *The Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life* [6th ed.]. London: John Murray.
- 1875. *Insectivorous Plants*. London: John Murray.
- 1984. *The Various Contrivances by Which Orchids are Fertilised by Insects*. Chicago: University of Chicago Press. [1st ed. 1862.]
- Davies, W. J.; Zhang, J. 1991. Root signals and the regulation of growth and development of plants in drying soil. *Annual Review of Plant Physiology and Plant Molecular Biology* 42: 55–76.
- Deacon, Terrence 1997. *The Symbolic Species*. New York: Norton.
- Deely, John 1986. On the notion of phytosemiotics. In: Deely, J. N.; Williams, B.; Kruse F. E. (eds.), *Frontiers in Semiotics*. Bloomington: Indiana University Press, 96–103.
- 1990. *Basics of Semiotics*. Bloomington, Indiana University Press.
- Eco, Umberto 1979. *A Theory of Semiotics*. Bloomington: Indiana University Press.
- Elsasser, Walter Maurice 1998. *Reflections on a Theory of Organisms: Holism in Biology*. Baltimore: The John Hopkins University Press.
- Emmeche, Claus 1998. Defining life as a semiotic phenomenon. *Cybernetics and Human Knowing* 5(1): 3–17.
- Haupt, W.; Feinleib, M. E. (eds.) 1979. *Physiology of Movements* (Encyclopedia of Plant Physiology, n.s. vol. 7.). Berlin: Springer.
- Heschl, A. 1990. L=C: A simple equation with astonishing consequences. *Journal of Theoretical Biology* 145: 13–40.

- Hoffmeyer, Jesper 1997. Biosemiotics: towards a new synthesis in biology. *European Journal for Semiotic Studies* 9(2): 355–376.
- 2000. The biology of signification. *Perspectives in Biology and Medicine* 43(2): 252–268.
- Ingensiep, Hans Werner 1999. Leben am Rande der Seelenordnung: Grundzüge einer Ideengeschichte der Pflanzenseele. *Jahrbuch für Geschichte und Theorie der Biologie* 6: 7–46.
- Jablunka, Eva; Lamb, Marion J.; Avital, Eytan 1998. 'Lamarckian' mechanisms in darwinian evolution. *Trends in Ecology and Evolution* 13(5): 206–210.
- Kawade, Yoshimi 1996. Molecular biosemiotics: molecules carry out semiosis in living systems. *Semiotica* 111(3/4): 195–215.
- Komárek, Stanislav 1998. *Mimicry, Aposematism and Related Phenomena in Animals and Plants: Bibliography 1800–1990*. Prague: Vesmír.
- Kraepelin, Gunda 1997. Mykosemiose. In: Posner, Roland; Robering, Klaus; Sebeok, Thomas A. (eds.), *Semiotics: A Handbook on the Sign-Theoretic Foundations of Nature and Culture, vol. 1*. Berlin: Walter de Gruyter, 488–507.
- Krampen, Martin 1981. Phytosemiotics. *Semiotica* 36(3/4): 187–209.
- 1986a. Phytosemiotics. In: Deely, J. N.; Williams, B.; Kruse, F. E. (eds.), *Frontiers in Semiotics*. Bloomington: Indiana University Press, 83–95.
- 1986b. Phytosemiotics. In: Sebeok, T. A. (ed.), *Encyclopedic Dictionary of Semiotics*. Berlin: Mouton de Gruyter, 726–730.
- 1989. An ecological approach to semiotics. In: Koch, Walter A. (ed.), *Evolution of Culture*. Bochum: Universitätsverlag Dr. Norbert Brockmeyer, 117–133.
- 1992. Phytosemiotics revisited. In: Sebeok, Thomas A.; Umiker-Sebeok, Jean (eds.), *Biosemiotics: The Semiotic Web 1991*. Berlin: Mouton de Gruyter, 213–219.
- 1994. *Pflanzenlesebuch: Pflanzenstudium, Pflanzennutzung, Pflanzenpoesie; der Wandel menschlicher Einstellung zu Pflanzen im Laufe der Geschichte*. Hildesheim: Olms.
- 1997a. Phytosemiosis. In: Posner, Roland; Robering, Klaus; Sebeok, Thomas A. (eds.), *Semiotics: A Handbook on the Sign-Theoretic Foundations of Nature and Culture, vol. 1*. Berlin: Walter de Gruyter, 507–522.
- 1997b. Models of semiosis. In: Posner, Roland; Robering, Klaus; Sebeok, Thomas A. (eds.), *Semiotics: A Handbook on the Sign-Theoretic Foundations of Nature and Culture, vol. 1*. Berlin: Walter de Gruyter, 247–287.
- 2001. No plant — no breath. *Semiotica*, special issue about Jakob von Uexküll (forthcoming).
- Kull, Kalevi 1992. Evolution and semiotics. In: Sebeok, T. A.; Umiker-Sebeok, J. (eds.), *Biosemiotics: Semiotic Web 1991*. Berlin: Mouton de Gruyter, 221–233.
- 1993. Recognition concept of species and a mechanism of speciation. *Folia Baeriana* 6: 133–140.

- 1998. Semiotic ecology: different natures in the semiosphere. *Sign Systems Studies* 26: 344–371.
- 1999a. Biosemiotics in the twentieth century: a view from biology. *Semiotica* 127(1/4): 385–414.
- 1999b. Symbiosis is semiosis. In: Wagner, Edgar; Normann, Johannes; Greppin, Hubert; Hackstein, Johannes H. P.; Herrmann, Reinhold G.; Kowallik, Klaus V.; Schenk, Hainfried E. A.; Seckbach, Joseph (eds.), *From Symbiosis to Eukaryotism: Endocytobiology VII*. Geneva University Press, 663–668.
- Maeterlinck, Maurice 1907. Die Intelligenz der Blumen. *Die neue Rundschau* 18: 1–29.
- Maran, Timo 1999. A note on the semiotics of biological mimicry. *Sign Systems Studies* 27: 139–145.
- Meyen, Sergey V. 1977. Taksonomiya i meronomiya. In: *Voprosy metodologii v geologicheskikh naukah*. Kiev: Naukova Dumka, 25–33.
- 1990. Netrivial'naya biologiya (zametki o...). *Zhurnal Obschej Biologii* 51(1): 4–14.
- Moriarty, Sandra 1994. Visual communication as a primary system. *Journal of Visual Literacy* 14(2): 11–21.
- Nagel, Alexandra H. M. 1997. Are plants conscious? *Journal of Consciousness Studies* 4(3): 215–230.
- Nöth, Winfried 1990. *Handbook of Semiotics*. Bloomington: Indiana University Press.
- 1994. Opposition at the roots of semiosis. In: Nöth, W. (ed.), *Origins of Semiosis: Sign Evolution in Nature and Culture*. Berlin: Mouton de Gruyter, 37–60.
- 1998. Ecosemiotics. *Sign Systems Studies* 26: 332–343.
- 2000. *Handbuch der Semiotik*. (2., vollständig neu bearbeitete und erweiterte Auflage.) Stuttgart: Verlag J. B. Metzler.
- Pollack, R. 1994. *Signs of Life: The Language and Meanings of DNA*. London: Viking.
- Rauscher, Mark D. 1996. Genetic analysis of coevolution between plants and their natural enemies. *Trends in Genetics* 12(6): 212–217.
- Rayner, Alan D. 1997. *Degrees of Freedom: Living in Dynamic Boundaries*. London: Imperial College Press.
- Real, Leslie A. 1993. Toward a cognitive ecology. *Trends in Ecology and Evolution* 8(11): 413–417.
- Rosen, Robert 1991. *Life Itself: A Comprehensive Inquiry Into the Nature, Origin, and Fabrication of Life*. New York: Columbia University Press.
- Schempp, Dieter; Frantz, Jürgen; Krampen, Martin; Weißinger, Sabine (eds.) 1997. *Mensch, Raum und Pflanze*. Braunschweig: Thalacker Verlag.
- Schmauks, Dagmar 1997. Pflanzen als Zeichen. *Zeitschrift für Semiotik* 19(1/2): 135–149.

- Schreider, Julij A. 1983. Sistematika, tipologiya, klassifikatsiya. In: Schreider, J. A. and Shornikov, B. S. (eds.), *Teoria i metodologiya biologicheskikh klassifikatsij*. Moskva: Nauka, 90–100.
- Sebeok, Thomas A. 1994. *Signs: An Introduction to Semiotics*. Toronto: University of Toronto Press.
- 1997. The evolution of semiosis. In: Posner, Roland; Robering, Klaus; Sebeok, Thomas A. (eds.), *Semiotics: A Handbook on the Sign-Theoretic Foundations of Nature and Culture, vol. 1*. Berlin: Walter de Gruyter, 436–446.
- Sharov, Alexei A. 1999. The origin and evolution of signs. *Semiotica* 127(1/4): 521–535.
- Sinnott, Edmund W. 1950. *Cell and Psyche: The Biology of Purpose*. Chapel Hill: The University of North Carolina Press.
- Stocker, Otto 1950. Das Umweltproblem der Pflanze. *Studium Generale* 3(2/3): 61–70.
- Tembrock, Günter 1975. *Biokommunikation*. Reinbek: Rowohlt.
- Uexküll, Jakob von 1922. Technische und mechanische Biologie. *Ergebnisse der Physiologie* 20: 129–161.
- 1928. *Theoretische Biologie*. 2te gänzlich neu bearbeitete Auflage. Berlin: Verlag von Julius Springer.
- 1936. Biologie in der Mausefalle. *Zeitschrift für die gesamte Naturwissenschaft* 2(6), 213–222.
- 1940. *Bedeutungslehre*. Leipzig: J. A. Barth.
- 1982. The theory of meaning. *Semiotica* 42(1): 25–82. [Translation of Uexküll 1940.]
- 1992. A stroll through the world of animals and men: A picture book of invisible worlds. *Semiotica* 89(4): 319–391. [1st ed. 1934.]
- Uexküll, Thure von 1981. Welche Einstellung zur Natur ist die richtige? In: Sieber, Heinz G. (ed.), *Mensch und Pflanze. Beiträge zum Projekt LOG ID: Leben mit Pflanzen* (Fundamente Alternativer Architektur 4). Karlsruhe: C. F. Müller, 1–5.
- 1986. Medicine and semiotics. *Semiotica* 61(3/4): 201–217.
- Volkman, D.; Sievers, A. 1979. Gravid perception in multicellular organs. In: Haupt, W.; Feinleib, M. E. (eds.), *Physiology of Movements*. (Encyclopedia of Plant Physiology, n.s. vol. 7.) Berlin: Springer, 573–600.
- Wickler, Wolfgang 1968. *Mimicry in Plants and Animals*. New York: McGraw-Hill.
- Wiens, D. 1978. Mimicry in plants. *Evolutionary Biology* 11: 365–403.
- Wilson, Brayton F.; Archer, Robert R. 1977. Reaction wood: Induction and mechanical action. *Annual Review of Plant Physiology* 28: 23–43.
- Wouters, Arno G. 1995. Viability explanation. *Biology and Philosophy* 10(4): 435–457.
- Wuketits, Franz M. 1998. Zeichenkonzeptionen in der Biologie vom 19. Jahrhundert bis zur Gegenwart. In: Posner, Roland; Robering, Klaus; Sebeok,

- Thomas A. (eds.), *Semiotics: A Handbook on the Sign-Theoretic Foundations of Nature and Culture*, vol. 2. Berlin: Walter de Gruyter, 1723–1732.
- Yates, F. Eugene 1997. Microsemiosis. In: Posner, Roland; Robering, Klaus; Sebeok, Thomas A. (eds.), *Semiotics: A Handbook on the Sign-Theoretic Foundations of Nature and Culture*, vol. 1. Berlin: Walter de Gruyter, 457–464.

Введение в фитосемиотику: семиотическая ботаника и вегетативные знаковые системы

В статье исследуется вопрос о наличии у растений семиозиса. Статья дает обзор имеющихся работ по фитосемиотике, связывая ее с ботанической традицией, рассматривающей растения как немеханические системы. Такой подход позволяет использовать понятие биологической потребности как первичного холистического процесса в живых системах. Демонстрируя сходство потребности и семиозиса, автор приходит к заключению, что знак — это мерономическая единица. Выделяются пять уровней знаковых систем: клеточная, вегетативная, анимальная, лингвистическая и культурная. Вегетативные знаковые системы участвуют в морфогенезе и дифференциации организма и встречаются во всех многоклеточных организмах.

Sissejuhatus fütosemiootikasse: semiootiline botaanika ja vegetatiivsed märgisüsteemid

Artiklis uuritakse küsimust, kas taimedel esineb semioosis. Antakse ülevaate senistest fütosemiootika käsitlustest, seostades seda traditsiooniga botaanikas, mis vaatleb taimi kui mittemehhaanilisi süsteeme. See lähene mine lubab kasutada bioloogilise vajaduse mõistet, nähes selles esmast holistlikku protsessi elussüsteemides. Näidates vajaduse ja semioosisse sarnasust, järeldatakse ühtlasi, et märk on meronoomiline üksus. Eristatakse viit märgisüsteemide tasandit: raku, vegetatiivne, animaalne, lingvistiline ja kultuuriline. Vegetatiivsed märgisüsteemid on need, mis osalevad organismi morfogeenesis ja diferentseerumises, esinedes seega kõigil hulkraksetel organismidel.

The circular semiosis of Giorgio Prodi

Felice Cimatti

Dept. of Philosophy, University of Calabria, Rende (CS), 87030, Italy
e-mail: fcimatti@sophia.unical.it

Abstract. Prodi's semiotics theory comes into being to answer a radical question: if a sign is a cross-reference, what guarantees the relation between the sign and the object to which it is referring? Prodi rebukes all traditional solutions: a subject's voluntary intention, a convention, the iconic relation between sign and object. He refutes the first answer because the notion of intention, upon which it is based, is, indeed, a fully mysterious entity. The conventionalist answer is just as unsatisfactory for it does nothing but extends to a whole group that which cannot be explained for a single component; the iconic one, finally, is rejected too since in this case the notion of "likeness", as the basis of the concept of "iconicity", is not explained. Prodi's answer is to locate the model of semiotic relations in the figure of the circle. The circle is life, which is nothing else but an infinite chain of translation and recognition relations amidst ever more complex systems. The circle has neither a beginning nor an end. It has no foundation, no established rule. It holds no cause that cannot become, in turn, effect. Semiosis, then, is based upon life for life, itself, is intrinsically semiotic. We can put the world in signs, that is we can come to know it, because we, ourselves, are a part of that very world that through us is made known. Finally, what this implies is that being inside the circle of semiosis-life, an issue arises what is beyond that circle: that is both an aesthetic and a religious problem.

Introduction

Giorgio Prodi (1928–1987)¹ was, first of all, a scientist, an oncologist. It was as a scientist that he started questioning himself on the purpose

¹ **Biographical note.** Giorgio Prodi was born in Scandiano (Reggio Emilia), in 1928 and died in 1987. In 1952 he graduated in Medicine, and later on in Chemistry as well, at the University of Bologna. From 1958 he taught in the same city general pathology

of his own activities. The things he would do when planning an experiment, how he went about doing those things, what his findings were — when the experiment was successful, that is to say, what was the nature of the object around which the experiment centered, and, mostly, on why knowledge was possible.

Traditionally, the issue of knowledge is presented, when reduced to its most elementary terms, as justifying the relationship between the one who knows — the subject — and what that knowledge is about, the object. How can the subject, which is free, meaning moved by reason, conscious, and active, know about the object, that, on the contrary, is moved by causes, thus falling under determinism, and is brute and passive matter? The problem of consciousness would be on how to reconcile these two opposite poles, separated by a fundamental dualism. Posed in such terms there is no answer to this question, for however many attempts are being made, the object shall always be too far from the subject: if the subject is separated from the object, due to the fact it is made of matter different from the one of the object (as according to the current Cartesian *vulgata*, that would be the *res cogitans* in respect to the *res extensa*) or because it responds to different principles (the former acts when reasons move it, the latter follows causes), being it operates according to different modes than the ones on which the object functions (the former is active, the latter is passive), etc. Well, in all of these cases there is no sound justification to be had for the fact, as far-fetched as it may be, that knowledge is possible, and that the subject is seemingly able to interact efficiently with the world (McDowell 1994).

It is to this question, instead, that Prodi gave an apparently simple, and for this very reason, radical answer. His answer, instead of presuming dualism and discontinuity, rather takes into account the assumption of biological unity and continuity: “knowledge has ‘stemmed’ from things, and it can come to know about these as in so much as it is measured on them due to its own same origin” (Prodi 1974: 134).²

We are not the ones, as presumptuous subjects, to know the object, rather things alone let themselves be known by us. We are nothing but

and then experimental oncology. From 1973 he directed the Institute of Cancerology of his university. In addition to a vast experimental scientific bibliography (more than 300 publications), he has published novels and poetry works.

² “La conoscenza è ‘venuta fuori’ dalle cose, e le può conoscere in quanto è dimensionata su di esse a causa della sua stessa origine”.

the ultimate transformation of other things, linked, in turn, to many others, and so on, all the way up to those very things we are presently knowing. The world does not account for an a priori distinction between subjects and objects which are separated and differ from each other, but only on more or less complex systems, all tied to an articulated web of relations that coincides with life (and semiosis and, hence, with knowledge, as we will see). If dualism is based upon a pattern entailing two separate poles that counter each other, Prodi's model is a biological one, concerning the evolution of living forms. In this model there are no halts but only ongoing transformations, living forms turning yet into other more or less complex forms of life. Subject and object cannot constitute the starting point of knowledge's developing process. Still they represent the final point, though never wholly attainable, for if such a full separation would ever occur, the biological continuity that links them, would break down. That would mean to say not the end of semiosis or knowledge, but of life itself.³

The line and the circle

To explain something means looking for a simpler fact or principle than the fact that one must explain, that is a fact or principle upon which the phenomenon which needs explaining must base itself. A thorough explanation should have an essential characteristic: if the phenomenon which needs explaining is found, say, at level L , its explanation S must then be at least at level $L-1$. That is to say, the explanation will have to make a more proper use of terms than the ones it needs to explain. Nevertheless, when this kind of explanatory logic is applied to mental and, in particular, semiotic phenomena, it is spontaneous to come and believe that it does not function properly. An intentional explication seems to better respond to these types of phenomena, meaning that a fact can be explained by presuming it stems from an explicit *intention* for that very fact to take place. For instance, we may ask ourselves why a baby cries; according to the intentional explication the baby cries because in its mind lies the intention to attract the parents' attention. The mental phenomena, and among these particularly the semiotic ones, would be defined, and therefore ex-

³ In the text which follows I will go through some of the principal ideas of Prodi's vast work on semiosis. An ampler study of it can be found in Cimatti (2000b).

plained only through the intentions of those who partake in them (Buysens 1943).

Such a conviction is strengthened by the idea that the use of signs rests upon an explicit convention (at least by and large), that is to say voluntarily. That the horse is named "horse", as this explication wants it, does not depend on how the horse is made but rather by the fact that is the way it has been decided, properly speaking due to a voluntary choice in this respect. Yet, then, all of the semiotic phenomena may be explained only through intentional notions, such as, for example, the voluntary one. An explanatory strategy of this type has a fundamental defect: it does not respect the rule illustrated here above, for it is more complex than what it would like to explain; if fact F is found at level L , S this time is placed at level $L+1$. Why? That is because we do not have access to what happens within people's mind, for we know nothing about intentions, we do not even know if intentions are real things as are bottle openers and philosophers. In this fashion the explication becomes more complex than what it would want to explain. Therefore, one cannot speak, in proper terms, of an explanation. More often than not, semiosis has tried to explain its facts through intentional explanations, that is by placing at the origin of semiosis a subject which voluntarily chooses to use a certain material object, the sign, in order to define something else, its meaning. As said before, this is no explanation in that it relies on a notion, as intention for instance, which cannot be summed up in something plainer. As Prodi himself observes (1982: 108): "The conscious is a fact to be explained through unconscious facts, even though usually there is a tendency to invert the points of the issue"⁴. One of the scopes of Giorgio Prodi's theoretical work, instead, is to try and explain semiosis by means of unintentional phenomena, thus truly respecting the norm that wants the explanation to be simpler than what it is explaining. While the intentional explanation can be illustrated by an arrow that descends from a higher to a lower level, with a criterion ranging from hard to easy, the unintentional one may be symbolized by an arrow heading the opposite way, as it goes from simple to complex levels.

⁴ "La coscienza è fatto da spiegare attraverso fatti non coscienti, anche se di solito si preferisce invertire i termini del problema".

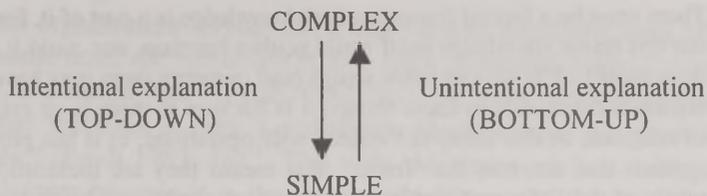


Figure 1. Non-biological explanation patterns.⁵

Still, if the strategy of the intentional explication seems hopeless, is its alternative, from lower to upper level, more efficient? Semiosis is a discipline that deals, primarily if not exclusively, with institutionalized current sign systems. Thus leaving the fundamental problem unsolved: if a sign is essentially a cross-reference, what guarantees the relationship between the sign and the object/thought to which it refers? Is it enough to appeal to social convention to establish such a relationship? Then, what does social convention, in turn, feed upon? Prodi's answer to this problem is to seek the origins of semiosis not in culture but, rather, in biology, or even better, in a biological method that closely considers culture in the relationships that are already established in different cellular entities.

Yet to consider biology altogether falling under the category of mediation, practically accounts for recognizing it as a single and infinitely complex web and interpretations of signs, likewise (Emmeche 1991). In this respect, however, one is quick to realize that Prodi's explanatory strategy is not even an unintentional reductionist one, that is to say one which attempts to undo, or properly reduce, complex phenomena in their simpler components. It is not so, according to Prodi, because the foundation of semiosis and language is, of course, in our world, but only given that the world is intrinsically already a language, meaning that it can be considered as an infinite chain of complex systems giving way to a continuous chain of other more complex combinations. Prodi's explanatory strategy then, cannot be represented by an arrow, regardless if it is directed from simple to complex or vice versa, but can be best illustrated with a circle (Lo Piparo 1992), that is a figure in which the end meets with the beginning. The subject is nothing but the last, and momentary, transformation of the object:

⁵ This diagram, as the following ones, is not Prodi's.

There must be a factual frame in which knowledge is a part of it, for without this frame knowledge itself could neither function, nor could it reproduce itself [...]. If we can know things (and in nature there may have been objects formed, able to know things) it is because a) there is an entire set of relations; b) this entity is "viable" with operations; c) it has produced systems that are, too, the "frame", that means they are included in the whole of the links, and employ actual present conditions, being that they are manifestations of it (Prodi 1982: 8)⁶.

The world is a "frame of facts", that is a whole of relations, not of separate and isolated things; this whole of relations, which is the world, defines the space of the "material logic found in the facts, in the relation of the elements on the horizon" (Prodi 1977: 43)⁷. This means, precisely, that the very world is intrinsically logical:

we are used to link logic uniquely with the functioning of the ability of thinking: yet if these are present in nature, their root is common to the one of material exchanges, in turn differentiated through more complex functions [...]. In this sense, logic, in its deeper step, is a material tautology. It is logic that which is (*Ibid.*)⁸.

The world, furthermore, coincides with life, for the vital phenomena are the phenomena where relations and mediations prevail (Cairns-Smith 1999: 72). In the world of life, in fact, every entity operates in accordance to a prime elementary form of "categorical logic" as Prodi calls it. A logic based upon selection, upon the discrimination of anything one may come in touch with and from which such a relation is not possible. A logic which produces the first implicit categories. Presently this "categorical logic [...] identifies itself with the general

⁶ "Deve esistere un telaio di fatti di cui la conoscenza fa parte, senza il quale né essa potrebbe operare, né potrebbe essersi prodotta [...]. Se noi possiamo conoscere le cose (e si possono essere formati in natura oggetti capaci di conoscere le cose) è perché a) esiste un insieme dato di rapporti; b) esso è "percorribile" con operazioni; c) ha prodotto sistemi che, essi pure, sono "telaio", cioè sono inclusi nell'insieme dei rapporti, e utilizzano condizioni di fatto presenti, essendone manifestazioni".

⁷ "Logica materiale [che] è nei fatti, nelle relazioni tra gli elementi dell'orizzonte".

⁸ "Noi siamo abituati a collegare la logica unicamente al funzionamento della capacità di pensiero: ma se queste sono presenti in natura, è perché si sono differenziate in natura, e dal momento che agiscono sulla natura, la loro radice è comune a quella degli scambi materiali che esse possono interpretare, essendo basate su una logica di scambi materiali, differenziati attraverso funzioni via via più complesse [...]. In questo senso la logica, nel suo gradino più profondo, è una tautologia materiale. È logico ciò che è".

biological organization" (Prodi 1977: 83)⁹, that is, precisely, with life. At the same time, the world-life is also logic, a natural logic, a "web of facts, a material web" (Prodi 1982: 9)¹⁰, or, even more explicitly, "the initial operation is, then, a preliminary identification of logic with onto-logic" (Prodi 1982: 16)¹¹. This web, this "network", is viable, it can be known because it is the very world-life model that produces "systems" that can get to know it. These systems are, in fact, nothing else but "manifestations" of that original network. The result is that – having an outcome all but paradoxical for every model obtusely materialistic – the complex world-life-natural logic gets to know itself through its own sub-systems and manifestations: "from the very beginning, what is meant is the radical interpretation of how gnoseology functions internally to ontology" (Prodi 1982: 9)¹². Knowledge becomes a function of being, a *partial* manifestation of being:

a frame of existing facts is the territory upon which one moves and in which, contemporarily, one searches for the explanation of moving. If there is an existing network of facts, and if we are part of it, our nature (structure, functions) stems from it, and as a specification of this, it can be neither contradictory nor external. We need not raise the issue of justifying the network, but rather being justified by it [...]. Such a network is then a continuity along our very selves: yet it is not to be estranged by us, as if we were globally external and opposed observers. We hold it within us, for our cognitive modes are simply one of its particular organizational methods. Through the network facts that are our make-up and the facts that connect us with the outer existence, we are submerged *without any possible interruption* in the most general web of facts (Prodi 1982: 15)¹³.

⁹ "Logica categoriale [che ...] si identifica con l'organizzazione biologica in generale".

¹⁰ "Trama di fatti, una trama materiale".

¹¹ "L'operazione iniziale è, dunque, una identificazione preliminare di logica con onto-logica".

¹² "Fin da principio, s'intende quindi radicalmente interpretare la gnoseologia come funzione interna all'ontologia".

¹³ "Un telaio di fatti esistenti è il terreno su cui ci si muove e in cui, contemporaneamente, si cerca la spiegazione del muoversi. Se esiste un reticolo di fatti, e se noi ne siamo parte, la nostra natura (struttura, funzioni) deriva da esso, né è una sua specificazione, non può essere né contraddittoria né esterna. Non si pone per noi il problema di giustificare il reticolo, ma di esserne giustificati [...]. Tale reticolo è dunque in continuità con noi: ma non è qualcosa di estraneo, che possiamo vedere come osservatori globalmente esterni e contrapposti. Lo conteniamo all'interno, perché le nostre modalità conoscitive sono semplicemente un suo particolare modo organizzativo. Attraverso i fatti reticolari che ci compongono e i fatti che ci connettono a quanto è fuori, noi siamo immersi *senza soluzione di continuità* nella trama più generale dei fatti".

It is not, then, the hierarchical and foundation model (illustrated with the line and the arrow) to be the guiding image of Prodi's thought, rather it is the image of the circle; along a circle there is no single point that can be considered as the foundation of all others. The circle, on the contrary, represents the model of a world considered as an infinite series of complex entities' transformations yet into other, more complex ones, and so on. A transformation chain that never shrinks from the deep web that unites every living form to other forms of life. Let us go over this sequence of evolutive identities, in order to show the paradoxical outcome to which it leads: the first one is the web-world of relations that is equivalent to the material logic. The latter, in turn, can even be understood as life; but life, as it has already been pointed out, is coextensive with semiosis, and therefore with language:

it is clear that material logic and material semiosis coincide. If one material presence selectively interacts with another one [as it is specifically for categorial logic], becoming a reference-sign and startling it in an operational mode, such is a logical condition which is related with the impersonal assertion "each time that...", and it expresses the non-elasticity of the structure within which everything is imbibed, thus going beyond any reflection and incorporating any consideration (Prodi 1977: 44)¹⁴.

Therefore, life equals semiosis, that is, language: "biology is a natural kind of semiosis" (Prodi 1987b: 147)¹⁵. Still, for what concerns the transitivity of this identity chain, one reaches the identity resting between language and world (in so much as that the world is coextensive to life), from which one moves into tautology that is simultaneously beginning and end — in the circle figure every beginning is also an end, and vice versa — of the language corresponding to the same language. Tautology, in genetic terms, means that language is at the origin of language (Prodi 1987b: 93). In figure 2, we shall try and summarize this chain of identities (the targeted vectors represent the path of the process, to be considered as a contemporaneous evolutionary and foundational model) (Figure 2).

¹⁴ "È chiaro che logica materiale e semiotica materiale coincidono. Se una presenza materiale interagisce selettivamente con un'altra [questa è specificamente la logica categoriale], scoprendola come referente-segno e come innesco operativo, questa è una condizione logica, che è connessa con l'impersonale asserzione "tutte le volte che ...", ed esprime la non elasticità del tessuto in cui tutto è immerso, e che va al di là di ogni riflessione e che ingloba ogni riflessione".

¹⁵ "La biologia è una semiotica naturale".

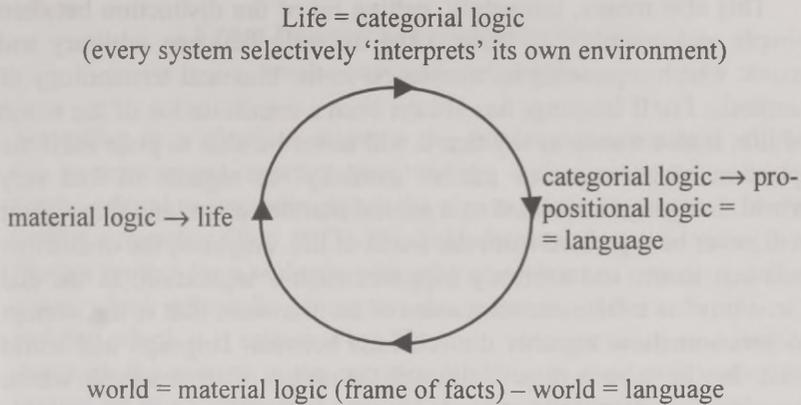


Figure 2. The circle as a founding pattern for semiosis.

The (apparent) final (world) language tautology = (human) language, in reality, is not properly so, for it gives an evolutive relation to time, from the world of language, as well as a foundational relation. Language is made possible, because it is nothing else but the last transformation of the very world, that in this respect can be described as its own product: “man — as Prodi affirms, and not by chance, with an Hegelian touch — [...] is a thought-up nature, [it is] inner nature” (Prodi 1987b: 93)¹⁶. Yet, already in this statement there is an implicit allusion to the dynamics internal to the circle, which, in reality, is not closed at all on itself (for if it really were it would render void language itself, to the extent there could not be any need whatsoever to express something already known), since the self-consciousness of nature is truly in continuous expansion. This means that the unknown regions, accessed through this former circular motion that developed into a spiral one, will be always more ample.

Language, according to Prodi, and semiosis generally, is not something of a distinctive nature from the world of life (Prodi 1988a). Language, and even its transformations, just as for society, culture, and history, do not counter nature, biology, and matter (Prodi 1988b). It is not, then, an attempt to simplify what is complex, as much as to show that what we believed being easy has, in reality, always been complex.

¹⁶ “L’uomo [...] è natura che si pensa, [è] l’interiorità della natura”.

This also means, ultimately, getting rid of the distinction between simple and complex, as well as the disparity between arbitrary and iconic which represents its translation in the classical terminology of semiosis. For if language has always been a manifestation of the world of life, it also stands to say that it will never be able to pose itself the question of its major or minor "iconicity" in regards to that very world. Language is defined as a natural manifestation, and therefore it will never be separated from the world of life. Anyhow, the distinction between iconic and arbitrary supposes such a separation. In the end "iconicity" is a false consciousness of arbitrariness, that is the attempt to knit somehow together the relations between language and world after they have been severed through the notion of arbitrariness, whose function is to drastically separate language from the world. Yet, if this assumption is abandoned, the idea that language, as a full-way manifestation of culture, is different from the natural world, there no longer is any need to soften its excesses with iconic drugs. Once the dualistic model has been forsaken, why bother asking oneself if language is more or less closer and/or similar to the world? Furthermore, to sustain that (nature's) language creates (human) language, does not mean falling back into idealism, no more than affirming that nature gives way to culture means falling into materialism. The same is true of renouncing the notion of intention which is not the equivalent of reducing semiotic and mental phenomena to sheer causal concatenations. If life is semiosis this means that, ultimately, it makes no sense to ask oneself where to trace the boundary line between culture and nature, if ever one should try to understand how nature becomes culture:

Duality is not overcome by synthesis, rather by the ascertainment that at the very base of it all there is no duality. Thrusting forward the natural-biological study of nature, on the one hand, we can see that in its most sophisticated and recent regions it becomes moral[...], on the other hand, returning to its origins, we can notice that every form of knowledge is innate in things. It is participation. It is likewise with man. The state of realities to be had is quite different from the one which we are accustomed to: things are speechless, yet they can answer when they are adequately questioned. By questioning them, one highlights one of their fundamental implications with the instruments that interrogate them, that is us. Our knowledge comes from far more ancient forms, all the way up to the roots of what is biological, that appears to be an "elementary knowledge" from the very initial steps of its organization (Prodi 1987b: 119)¹⁷.

¹⁷ "La dualità non è superata dalla sintesi, ma dal constatare che, alla radice, non esiste dualità alcuna. Spingendo a fondo lo studio naturale-biologico della natura, da

From biological complementarity to the semiotic triangle

According to a classical diagram, the fundamental semiotic relation can be represented, approximately at first, with a triangle, in which a sign is related to a certain object, the sign referent, through the mediation of a meaning (Eco 1973: 25). This diagram, in the framework of Prodi's project for a biological foundation of semiosis, raises a radical issue: which principle guarantees the relationship between the sign and that which it is referring to? The most obvious solutions are those that seek the answer in the question itself or in the intentions of the subject, or in an agreement among subjects. An agreement which can be translated into a code, which should establish a list of correspondences between signs (meanings) and the corresponding objects, or in the fact that somehow the sign should be similar to the object (sign "iconicity"). We have begun to demonstrate tracing Prodi's steps, that the first idea is not an answer since it is based upon a principle, the intention or the consciousness of the subject, which is completely mysterious, whereas a good explanation should always rely upon facts simpler than those that need explaining. Even the code solution is truly unsatisfactory, for it does nothing but extending the first (pseudo) answer to the entire society that uses that given code: if there is no real justification for the fact that for the single subject the sign *S* is in relation with the object *O*, why should we feel better if we take into account all of the subjects that use that same code? If the relation is unjustified for the one, it will be even more so by multiplying that one for all of those that make use of it. According to the iconic solution, finally, the sign would be in relation with what it is referring to because it would somehow look like it. Truthfully, not even this solution appears to be viable since the relation of likeness does not seem to be a natural one, but rather, itself, be unconsciously based upon an

una parte vediamo che nelle sue più sofisticate e recenti regioni essa diviene morale [...], dall'altra, risalendo indietro verso l'origine, vediamo che ogni forma di conoscenza è connaturazione con le cose, è partecipazione. Così anche per l'uomo. Il quadro della realtà da conoscere è ben diverso da quello che ci si prospetta abitualmente: le cose sono mute, ma possono rispondere quando sono adeguatamente interrogate. Interrogandole, si evidenzia una loro fondamentale compromissione con gli strumenti che le interrogano, cioè con noi. La nostra conoscenza deriva da forme più antiche, via via fino alla radice di ciò che è biologico, che ci appare in sé come "conoscenza elementare", fin dai primi passi della sua organizzazione".

estimated choice operation. For instance, whatever object Q is similar to whatever other thing Q1, not because it is naturally so, but because someone sees in Q1 a likeliness with Q. Therefore there is always someone finding a similarity, which is not something of a given in nature, but appears to be always in the eyes of the subject¹⁸. If this is so, "iconicity" rests upon a few instituted rules (and a rule said to be 'unaware' is by all means still a rule), hence it would be a somewhat arbitrary relation, and finally it could never constitute the undisputed foundation of the relation between the sign and what it refers to. If "iconicity" is understood as something that has to do with resemblance it cannot represent the solution for the problem of the foundation of semiotic relation. In the semiotic model, that we can define as Cartesian, the sign is inscribed to hold, as in the case of the subject in regard to the semiotic instrument it uses, no link with what it is indicating. Such an original separation makes it difficult for any attempt to bring back together these two wholes, the subject and the object.

To answer the question we asked ourselves earlier, that is what does the semiotic relation rely upon – it is necessary to take into consideration not the semiotic triangle under way, but rather ask oneself how are the first proto-semiotic interactions in nature, and thus within the phenomena of life, born. Prodi's starting point is the concept of natural *significance*:

the most general condition for a language situation (that is retrieval and transmission of sense) is significance, the condition for which a natural presence is correlated to another natural presence through a relation of selectivity. This condition is at the origin not only of language as it is normally intended, but of the entire biological organization: which is, according to this point of view, intrinsically linguistic (Prodi 1983b: 186)¹⁹.

Let us take into consideration an absolutely elementary situation, illustrated in figure 3: an organism *A* that explores its environment. Inside this environment, to make it easier, there are only four objects *B*,

¹⁸ We are before the classical critique of Eco (1975) on the notion of "iconicity". Yet, while for Eco this critique had the function to defend a completely arbitrary position, in our case it helps to make way for a biological model of semiosis, which is neither arbitrary nor iconic.

¹⁹ "La condizione più generale per una situazione di linguaggio (che è reperimento e trasmissione di senso) è il significato, cioè la condizione per cui una presenza naturale è correlata ad un'altra presenza naturale attraverso una relazione di selettività. Questa condizione è alla base non solo del linguaggio come normalmente inteso, ma di tutta l'organizzazione biologica: la quale è, sotto tale punto di vista, intrinsecamente linguistica".

C, *D*, and *E*. *A* has a certain make-up, for instance, if *A* is a protein, the atoms that form it will give it a particular spatial configuration, that is a particular ability to come in touch with certain object forms excluding all other forms. In the *A* environment the only other object it is possible to come in relation with is *B*, meaning that *A* and *B* have a specific complementarity. Using a metaphor that Prodi often employs, between *A* and *B* there is an analogous relation to the one that a door lock and the only (at least in theory) key to open it share. *B*, in respect to *A*, represents the only meaningful portion of its environment (or, to use another terminology "pertinent"): "significance is a categorization: a sign, that is interactive selection" (Prodi 1982: 169)²⁰. *B*, for *A*, is a sign that 'means' the relation it can, in fact, have with *A*. However, at this all but primitive semiotic level, *B* is a sign that is identical to its referent, that is, *B* does not refer to else but itself: in *B* the sign and the referent coincide. Properly said, the semiotic triangle is in turn a point to reach, for the "boundaries of the semiologic relationship are initially only two [...] mediation (the autonomy of the sign) is subsequent" (Prodi 1977: 158)²¹. *B* for *A* 'means' an object with which it is possible to come in touch, and with which it can form a more complex system, an agglomerate [*ab*]:

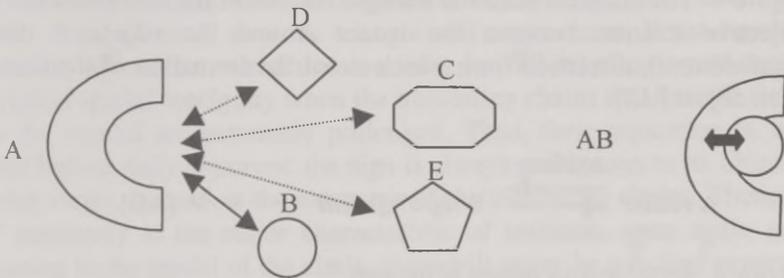


Figure 3. The origins of semiosis as a natural significance.

At the beginning neither is *A* a subject nor is *B* an object, since the subject is such only in respect to something which counters it (an object), just as an object needs, from a biological point of view, in so much as that all of Prodi's model is not but a reconstruction of semio-

²⁰ "Il significato nasce come categorizzazione: è segno, cioè interazione selettiva".

²¹ "I termini del rapporto semiologico sono inizialmente due [...] la mediazione (l'autonomia del segno) è posteriore".

sis in biological terms, a subject in order to define itself as such. At the same time *B*, as previously noted, is a sign for *A*, in the sense that it is intrinsically endowed, in *A*'s respect, with a certain significance for it is important coming from its point of view. *B* is not only an object. It is an object that means something for yet another object (that special object which Prodi refers to as a "reader"): "the sign is not the thing, but the thing in relation to a reader: the sign is the existence of a deciphering, or relationship, or reaction specificity process" (Prodi 1982: 169)²². In this respect the foundation problem on how to justify the union of a sign with what it indicates is overcome since *B* is, *at the same time*, sign and referent. The sign, in biological terms, comes into being as a union, as a continuity:

our problem is: how is this significance situation, for which a thing is a sign for an interpreter possessing its code, born in nature [...]. In this case, the sign does not have two sides, there is no *semainon* nor *semainomenon*. The sign is a thing. A thing becomes a sign when a reader that can interpret it appears and "picks it up" selectively. The selection, that is the specific relation conducted by a sign interpreter: such is the origin of semiotics (Prodi 1987b: 146)²³.

The basic situation represented in figure 3 can now be sketched in figure 4. The classical semiotic triangle flattens in the complementary bijective relation between the reader *A* and the object *B* (the sign/referent), a relation from which stems the formation of the complex object [*AB*]:



Figure 4. Non-triangular pattern of the sign.

Extended chains of natural significance form on the basis of proto-semiotic complexes (as in the case of [*AB*] in figure 4), that is, living

²² "Il segno non è la cosa, ma la cosa in rapporto a un lettore: il segno è esistenza di un processo di decifrazione, o rapporto, o reazione di specificità".

²³ "Il nostro problema è: come nasce in natura questa situazione di significato, per cui una cosa è segno per un interprete che possiede il codice [...]. In questo caso il segno non ha due facce, non c'è *semainon* e *semainomenon*. Il segno è una cosa. Una cosa diventa segno nel momento in cui compare un lettore che la può leggere, che la "prende su" selettivamente. La selezione, cioè la relazione specifica condotta da un interprete del segno: questo è l'inizio della semiotica".

organisms which are “complex federations of significance interpretation, coherent and capable of expressing their own sought-out reading advantage on the surroundings. In this respect one can speak of the intrinsically “linguistic” character of biological objects” (Prodi 1983b: 189)²⁴. From such an indication one may also infer an idea about how, according to Prodi, the mind my function: “a network (united in its de-centered entirety) more than [...] a hierarchical type of unit, that can be represented as a system of vertically-placed filters” (Prodi 1983b: 176)²⁵. The hierarchical system is completely compatible with the classical Cartesian model, the one that sees consciousness at the zenith as an uncaused cause in that it is formed by a substance which is altogether different from the one found in the rest of the brain (Eccles 1996). A concept of this kind is incompatible with Prodi’s naturalistic model, for it places at the top of the whole system a mysterious *res cogitans*, by definition irreducible to a simpler form: “we do not have the pretence of explaining the language with an extra-natural intervention of an “intentional” kind” (Prodi 1983b: 314)²⁶. The mind, instead, according to Prodi, is, in fact, a network, a complex federation of significance interpretation chains, a material network, notwithstanding how astronomically complex, of situations like the one represented in figure 4 (Cimatti 2000a).

In Prodi’s model, then, the separation between sign and referent as seen in the classical semiotic triangle will never occur. It can be observed only to the extent that we have lost all recollection of their original spatial contiguity when the translating chains that link the first to the second are extremely prolonged. Thus, their separation is, as said before, only *apparent*: the sign is always contiguous to its object, what varies, instead, is the extension of the translating chains. Though if continuity is the major characteristic of semiosis, once again returning to the model of the circle, there will never be a radical separation between sign and referent. That leads, in turn, to flattening the semiotic triangle in a continuous transformation line of entities in other more complex ones:

²⁴ “Federazioni complesse di letture del significato, coerenti e capaci di esprimere sull’intorno il proprio raggiunto vantaggio di lettura. In ciò risiede il carattere intrinsecamente “linguistico” degli oggetti biologici”.

²⁵ “Più un reticolo (unitario nella sua globalità decentrata) che [...] una unità di tipo gerarchico, rappresentabile come un sistema di filtri disposti verticalmente”.

²⁶ “Noi non pensiamo di spiegare il linguaggio umano con un intervento extra-naturale di tipo “intenzionale””.

the two faces of the sign occur from the moment when there appears a sufficiently complex code in nature; yet, if we were able to undo a sign in its various steps, we would discover [...] that every step is formed by a reader-thing that interprets another thing which, in turn, is seen as a sign, that is, subsequently read by yet another thing. All the molecular processes that we are beginning to be aware of rather well, in the present-day, (from the proteinic synthesis to the employment of energy, from the duplication of the DNA to the transmission of nervous drives) belong to this typology. Man's cerebral functioning is surely terribly complicated [...] but it is hard to believe that it may operate differently from a continuous molecular recognition of significance (Prodi 1987b: 147)²⁷.

On the borders of the circle: the aesthetic experience and the religious problem

Prodi affirms that our knowledge of the world cannot avoid passing through the filter of a theory, that is a network of hypotheses. In this respect, the knowledge of the world is nothing but another manifestation of language. In this very categorization it is clear that there will always be something that will pass through the nets of such a framework given that 1) a network is made in a way to relinquish something from its meshes; a network is made-up of knots and each knot is tied to another, and no matter how closely-knit this web can be there will always be empty spaces between knots. A network is selective, that is, every network will let something go by, hence any hope of having absolute knowledge of reality is nothing but an illusion. An illusion because it is logically impossible (and therefore, according to Prodi, ontologically and semiotically, too) to strive for an ultimate understanding of the world; 2) every network, no matter how extended, is nevertheless limited. A bigger network would be useless as it could hardly function. Yet, if every network *must be* (more or less) small it means that the attempt to use it in exploring the total surface of the sea

²⁷ "La doppia faccia del segno si ha dal momento in cui si pone in natura un codice sufficientemente complesso; ma se riuscissimo a smontare un segno nelle sue varie tappe, scopriremmo [...] che ogni tappa è formata da un lettore-cosa che legge un'altra cosa che diventa segno per lui, e questo a sua volta è letto da un'altra cosa. Tutti i processi molecolari che oggi cominciamo a conoscere abbastanza bene (dalla sintesi proteica all'utilizzazione dell'energia, dalla duplicazione del DNA alla trasmissione degli impulsi nervosi) sono di questo tipo. La funzione cerebrale dell'uomo è certo di una complicazione terribile [...] ma è difficile pensare che essa funzioni in modo diverso da un continuo riconoscimento molecolare di significatività".

is by definition unattainable. Knowledge might even single out very large portions in that infinite sea of the knowable yet they remain limited. Once again, it is the figure of circle that explains this situation. The logic of language as a generative whole defines a space indefinitely extended, for there is no superior limit, at least in principle, in regard to the admissible sentence combinations in our language. Anyway, such a whole, regardless of its great size, will be a mere fraction of the entire infinite within which the rules of our language are (still) not valid. The inherent logic of language defines two complementary spaces: the one in which its rules are valid, and that coincides with the world, *our* world (for we hold no other access to the world than the one mediated by knowledge = language), and the other one, containing the former and being infinitely more extended than that one, in which such rules are not valid, as we will attempt to show in figure 5:

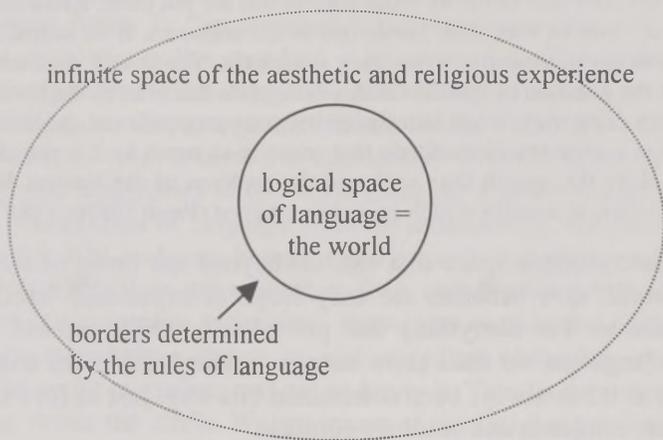


Figure 5. The biological origin of the aesthetic-religious issue.

Thus, we have reached the problem of borders, that is the aesthetical question together with the theological one. For Prodi, they are both determined by logic even prior to the feeling of beauty or fear of the unknown: "sacredness is, then, from such perspective, a precise drive that embodies logic" (Prodi 1987b: 119)²⁸. Language, understood as a circle, defines two concentric spaces: we are inside the space of language, and by definition we cannot go beyond the limits imposed by

²⁸ "Il sacro è dunque, da tale prospettiva, una pulsione precisa che fa corpo con la logica".

its inherent logic, for we cannot think outside the language. Every single conceivable access to the world must pass through language. Every thought is determined by language, and therefore that which is not governed by the rules of our language is unthinkable. Since our language determines a space, and we are within that given area, it brings about the logical need, that however cannot be further defined, of all that which is external to our very language field. Logically we can recognize that there is no space outside the logic, that is, our logic, yet this space, just as logically, is unattainable, unknowable, unthinkable. Here, then, there is more space for the possibility, that is historical and evolutive logic, of those experiences that are found at the very borders of language, both aesthetic and religious:

[human reality] is not only composed of objects *A, B, C*, and so on, including those hidden objects that are highlighted and seized by language, but also (and ever more) by those objects that are not there. Knowledge is, in fact, from its very start, firmly tied to the unknown. If an animal reacts towards his significative terms, they alone exist. The animal does not pose itself the question of whether things exist or do not exist at the borders of its own categories. When knowledge becomes propositional and reflexive, there is a contextual incertitude that arises in so much as it is not characterized by the speech thus settles in the problem of the borders *beyond which* there is a reality which cannot be attained (Prodi 1987b: 118)²⁹.

The undeterminable space that extends beyond the limits of the language-world, now becomes the only scope of experience which we can aspire to. For everything that precedes it, which we can learn through language, we shall know sooner or later (such is the scope of science) as it has always been determined this way, just as for Prodi it is because semiotics and ontology coincide.

Within the circle, instead, we are attracted by what is outside it. That is, what is defined as that which we cannot know, because the logic of our life and of our language prevents it: "hence, the fundamental issue is borders: what we are unable to understand, what lies beyond the boundaries, and for which we have no categories" (Prodi

²⁹ "[La realtà umana] non è solo composta dagli oggetti *A B C* e via via dagli oggetti nascosti che vengono evidenziati e catturati dal linguaggio, ma anche (e sempre più) dagli oggetti che non ci sono. La conoscenza è infatti, fin da principio, solidalmente legata alla non-conoscenza. Se un animale reagisce verso i suoi termini significativi, solo essi esistono, non si pone per lui il problema di ciò che forse c'è e forse non c'è al di là dei limiti delle sue categorie. Nel momento in cui la conoscenza diventa riflessa e proposizionale, si pone contestualmente l'incertezza per quanto non è caratterizzato dal discorso: sorge il problema dei confini *oltre i quali c'è* una realtà imprevedibile".

1987b: 212)³⁰. This indefinite and extra-logical space, in particular, can be known only from within: "no reader can exit reality and contemplate it from outside. One may read only from 'within', that is inside a complex of interactions" (Prodi 1983a: 17)³¹. This area beyond language may be reached through two distinct yet linked ways. Firstly, through a hypothetical process of the extension of language itself, in a way making an attempt to redirect the unknown to the known. Secondly, entirely admitting the logically inescapable fact of the limit of the space determined by the language-world circle. The first possibility is aesthetical, and in particular poetic, while the second one is religious.

Let us return to the language-world circle of figure 5. The human animal coincides, for what it holds of specifically human, with its language. Language defines the borders of the human world due to its biological complementarity between the reader and the organism read (v. supra, figure 2): "an organism knows-interprets (has a specific relation with) the reality *on which* it has formed itself. It interprets the world together with its categories, even though it is *such* a world that has built those very categories" (Prodi 1987b: 143–144)³². Given that the whole of what is known is coextensive with the whole of the language, the boundaries of the world coincide with the borders of what the (innate) rules of language allow us to think-say. The point is that, as previously said, our human experience is completely *within* that circle, yet this does not prevent us from understanding that beyond it, where our categories are useless, there is an *outside* that although unknown, nonetheless attracts us, and regardless of the fear we feel we have an urge to explore and get to know it. This feeling occurs, once again, inside the circle. We are aware of the fact that our knowledge, that is the whole of operations with which we recognize as significant certain portions of reality (as this is the true point, only *some* portions, not the entire reality, by definition unreachable by beings endowed with only a *particular* point of view), is meaningful only in relation to an infinitely more vast region of the unknown, "[which] is [...] a fundamental constituent of the speech, and brings into speech

³⁰ "Dunque, il problema fondamentale è quello dei bordi: ciò che non riusciamo a capire, ciò che sta oltre i confini, per cui non abbiamo categorie".

³¹ "Nessun lettore può uscire dalla realtà e contemplarla da fuori. Si può leggere solo "dentro", cioè dall'interno di un complesso di interazioni".

³² "Un organismo conosce-interpreta (ha relazione specifica con) la realtà *su cui* si è costruito. Interpreta il mondo con le sue categorie, ma queste categorie *quel* mondo stesso le ha costruite".

the burden of all the existing things of which, though, we have no documentation. Therefore, the word implies a non-word, not through games of dialectics but rather thanks to the mechanics of speech genesis" (Prodi 1983a: 40)³³. Knowledge, as we said, is the natural operation through which one asserts that something, in respect to a myriad of other possible and alternative 'somethings', is significative. What is not significative, on the contrary, remains in the background, just as any word that defines itself in relation to an ampler space of speechlessness, and is thus destined to remain unknown as well as unthought of. Yet, this implies that the unknown (the region without boundaries that extends to the exterior of the area of the circle in figure 5) is always present, in the form of background or as an indefinite horizon of (possible) knowledge. "If what is called "rationality" is the whole of modes in which man has learnt to humanly manage a certain area of reality (that has become a little more its own), the rational is, then, a small space cut out in the irrational, always placed within it. The rational is a tiny "organized irrational"" (Prodi 1983a: 41)³⁴.

The aesthetic experience, that for Prodi is all but restricted to that of beauty or art, is the one felt in the proximity of that boundary. The aesthetic experience is akin to the cognitive one. It represents the initial, hypothetical, explorative moment because a strong "cognitive drive" is at the base of it. Aesthetics is present wherever, coming from the experience of a precise cognitive placement, within the language-knowledge circle, one attempts to thrust himself beyond it, towards the exterior. As Prodi himself says, the unknown, or towards the "dark" (being, as we shall see further on, another way to characterize that which for the religious experience is god, unknowable and always exceeding our limited tools to circumscribe it):

The main nucleus of aesthetic quality deals with our own undecided placement, meaning our own being, entirely, the very object of that wavering that characterizes the borders (and further): our own selves being most likely beyond those borders, unknown to us in a radical fashion, unable to act with decisive introspection, with direct shortcuts, even when

³³ "[Il quale] è [...] un costituente fondamentale del discorso, e porta nel discorso tutto il peso delle cose che esistono, ma di cui non abbiamo documenti. Quindi la parola implica la non-parola, non attraverso giochi dialettici ma attraverso la meccanica della genesi del discorso".

³⁴ "Se chiamiamo "razionalità" l'insieme dei modi in cui l'uomo ha imparato a maneggiare umanamente una certa area di realtà (che è diventata un po' più sua), il razionale è allora un piccolo spazio ritagliato nell'irrazionale, sempre depositato nel suo interno. Il razionale è un minuscolo "irrazionale organizzato"".

really close to ourselves, almost as if coinciding with our own center, if ever there is one (Prodi 1987b: 216)³⁵.

Having linked anxiety with the experience of the limit, the human animal has its own way to respond to uncertainty. It does so with an hypothesis, with an attempt to extend to the unknown and to the future what is worthwhile for the known and the present-day (and thus the past):

hypothesis and doubt are two aspects of the same mechanism [...]. It is hypothesis [...] that transforms the knowable world. Doubt itself refers to areas of reality which are larger than those that we have experienced: it is relative to the area of "non-significative" things which can become significative; it is the possible area. It is not a sheer psychological state. It is *res extensa* adequate enough to be considered linguistic organization" (Prodi 1983a: 38)³⁶.

The hypothesis is not (yet, and might never be) justified, in so much as it is a hypothesis, that is, an attempt at extending the boundaries of the known at the expense of the unknown. The hypothesis is actually such for it is not justified, because if it had been justified, it would have ceased to be, appropriately, a hypothesis, and thus the clause would return amidst proven facts, scientifically described, that is, facts internal to the language-world circle.

The role of language is central in the construction of hypothesis: that we may bring forward having the avail of language's combinatorial resources, which allow us to internally generate those clauses (still) unrestricted by the exterior world's characteristics. In fact, hypothesis is (relatively) free given that language as a combinatorial machine allows to produce an indefinite number of terms, each of which may represent a possible explorative path. A way to grasp, in the space external to the language-world, contents that were just waiting

³⁵ "Il nucleo duro dell'esteticità è una certa nostra collocazione indecidibile, cioè l'essere noi, integralmente, proprio l'oggetto di quella indecidibilità che caratterizza i bordi (e oltre): l'essere noi presumibilmente già oltre i bordi, cioè oscuri a noi stessi in modo radicale, impossibilitati ad una introspezione decisiva, a scorciatoie dirette, ancorché vicinissimi a noi stessi, quasi coincidenti col nostro centro, ammesso che ci sia".

³⁶ "Ipotesi e dubbio sono due aspetti dello stesso meccanismo [...]. È l'ipotesi [...] che trasforma il mondo conoscibile. Il dubbio si riferisce a zone del reale più larghe di quelle di cui abbiamo esperienza: è relativo alla zona di cose "non significative" che possono diventare significative; è l'area possibile. Non è un semplice stato psicologico. È *res extensa* passibile di organizzazione linguistica".

to become, using Prodi's terminology, significative, to select a reading machine that may interpret them:

[the hypothesis is] a fantastically processed original nucleus [...]. Hypothesis is a fantasy situation, meaning a cerebral de-facto state characterized by the subject's ability to autonomously have its own linguistic materials, without any environmental-external dependence on selections or restrictions or censorship, from feedback unto reality. It is considered a structure's material state. The inner space extends to the outer space, that is the pole of knowledge: though it is temporarily isolated from it during the operativeness of the hypothesis (Prodi 1983a: 209)³⁷.

The hypothesis is intrinsically cognitive, but even inherently aesthetic, that is to say poetic, for it rightly is an internal experimentation. A word game that seems to act according to a purely combinatorial logic, though, also in this case, it produces what we may refer to as "cognitive tentacles" with which to tear shreds of "darkness" from the unknown in order to make them knowable and expressible. Through the auxiliary of hypothesis a kind of surrealist bridge, resting on a single bank that is internal to the language-world, is built, while on the other bank, initially, it is suspended. It rests supported only by its own weight, and however paradoxical it might sound, it is not considered so, which, in turn, is the true paradox inherent in the hypothesis. Such a paradoxical condition comes from the logical impossibility of speaking about what is beyond the borders of the language-world. By definition, for anything which is found beyond the borders of the expressible-knowable nothing can be said that would make any sense. That is because none of our clauses can be accepted or denied in regard to the pro or con proofs relative to it.

Let us return, once more, to figure 5. The aesthetic dimension of language, places us, as it has been said earlier, on the outskirts of the world. On the outskirts, or right over the boundary line where, logically, we could not stand even though we try and stay there, anyway, by using the instruments of analogy, that is a particular linguistic procedure in which the old projects himself into the unknown in order to

³⁷ "[L]'ipotesi è] un nucleo originale di elaborazione fantastica [...]. L'ipotesi è una situazione di fantasia, intendendo con ciò uno stato di fatto cerebrale caratterizzato dalla capacità del soggetto di disporre autonomamente i propri materiali linguistici, senza alcuna dipendenza da selezioni o restrizioni o censure esterne-ambientali, da *feed-back* sul reale. Essa è uno stato materiale della struttura. Lo spazio interno si continua con lo spazio esterno, che è il polo della conoscenza: ma ne è isolato temporaneamente durante la operatività dell'ipotesi".

see if it works there too. Even that portion of “darkness” covered by our hypothesis is governed by the same laws of the known, the already known. The hypothesis, then, is based on the analogy:

the analogy functions aesthetically in the direction of darkness, as an attempt to translate/enlarge our area towards it, in terms of verbal meanings. They are unverifiable. They do not make any sense in their providing with objective references. At the base of this is a radical analogous mechanism [...]: to yield our point of view in the dark, to be watched by eyes that we cannot see. To be watched by things rather than looking at them: even from their hidden sides (Prodi 1983a: 207–208)³⁸.

This means that, thanks to the aesthetic use of language, the boundaries of the language-world extend. At first, they extend only hypothetically, but then, if the analogy holds firm, even cognitively, as we try to point out in the diagram below, where the hypothesis-analogies stretch out those “tentacles”, which we talked about earlier, in the unknown, in the “darkness”:

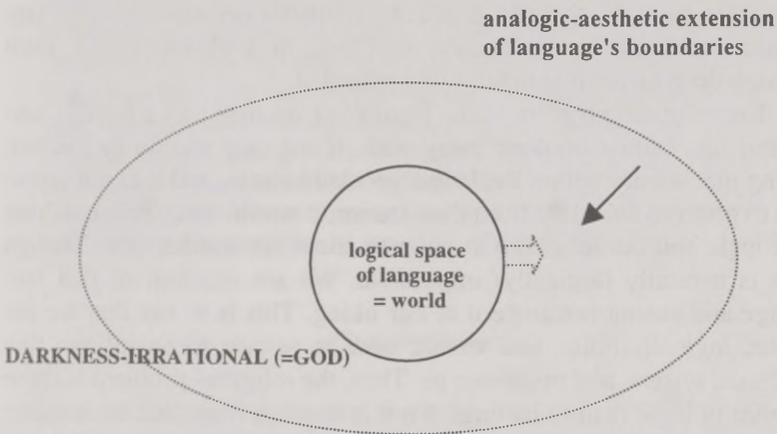


Figure 6. The hypothesis of poetry that extends knowledge into the “darkness”.

³⁸ “L’analogia funziona esteticamente nella direzione del buio, come tentativo di traduzione-allargamento dell’area nostra verso di lui, in termini di costrutti verbali. Essi sono inverificabili, non hanno senso nella loro referenzialità oggettiva. Alla loro base vi è un meccanismo analogico radicale [...]: cedere il nostro punto di vista al buio, essere guardati da occhi che non vediamo. Essere guardati dalle cose, anziché guardarle: anche dal loro lato nascosto”.

If the aesthetic is akin to science, all along, given that in both cases it has “to digest the unknown with the digesting system of a language that works” (Prodi 1983a: 208–209)³⁹, nevertheless, it still accounts for the logical, yet entirely insurmountable fact that neither of the two experiences can help us relax our minds before the undetermined fall of darkness. In addition, knowledge, regardless if scientific or aesthetic, stems from the attempt to practically overcome that anxiety, yet at the same time, due to its partial and almost compensating nature by definition, does nothing but reassert our dissatisfaction, our feeling of narrowness and finitude. Before our logical eyesight there always lies the boundless vastness of the unknown, “of that full length [...] prevailing outside us [...] the region of what is inexpressible” (Prodi 1983a: 195)⁴⁰, that is referred to by many, in ordinary vocabulary filled with an anthropomorphism which is unfamiliar to Prodi, as God. Herein, seen neither as someone nor as something, but if anything, as the matrix of *every* determined something, and in particular this region represents the speechless and dark horizon of our dissatisfaction as linguistic animals, that can produce hypothesis because, through language, we reach the awareness of living in a closed world, even though deep inside it is indefinitely extended.

The religious problem stems from what we may call a *logical sensation* that cannot be done away with, if we may use an oxymoron, being that we are within the language-world circle, and it is not possible to observe the circle from the exterior, it would mean relinquishing our logic and our language in order to adopt yet another one. Though this is naturally (logically) impossible. We are children of that language and cannot renounce it at our liking. This is to say that we are finite, *logically* finite, and we are such in respect to an infinite that exceeds, towers, and oppresses us. Thus, the religious problem is more similar to logic than to feelings, for it is through logic that we become practically and essentially aware of our limits: “sacredness then, in such a perspective, is a precise drive that embodies logic” (Prodi 1987a: 119)⁴¹. In this sense the religious problem, and so much for all the materialistic utopias of a world without God, is inscribed in our own being.

³⁹ “Digerire il non conosciuto col sistema digerente di un linguaggio che funziona”.

⁴⁰ “[Quel’]”esteso e [...] prevalente fuori di noi, [...] la regione dell’indicibile”.

⁴¹ “Il sacro è dunque, in tale prospettiva, una pulsione precisa che fa corpo con la logica”.

The materialistic and functionalistic explanations of religion try to explain its origin by linking it to the feeling of panic, fear of the unknown, thus connecting it to the most obscure and blindfolded drives of our mind. By so doing they create a sentiment that, at least in theory, might be overcome one day thanks to an adequate education, sufficiently developed scientific knowledge. In Prodi's approach, on the contrary, the religious problem is intrinsically inscribed in our minds. This does not mean to say, according to the trivial belief that the *idea* of God is innate (although this does seem as a captious and circular justification of religion), as much as it signifies that our deep-rooted linguistic make-up naturally brings us, through the aesthetic experience of hypothesis, to question ourselves on the limit, and to wonder, what could or could not be beyond that point. In this sense the religious experience is akin to an instinct, a very particular *logical instinct*, yet another oxymoron, that is totally a whole with our being intrinsically and radically linguistic animals:

In the complex, the hypothesis suggested is opposed to the anthropological and ethnographical theories based on the absolute irrational originality and primitivity of sacredness, pertaining to a rudimental phase of civilization. They invariably take into consideration an already genetically constituted man. Whereas what is being affirmed, instead, is that the origin of sacredness must be anticipated to the phase of man's rational formation, otherwise said of its specific differentiated traits. For it is contextual to logic and morality. Sacredness characterizes the passage from non-man to man, and collaborates to building its specificity (Prodi 1987a: 118)⁴².

Conclusions

The circle is a figure without a beginning or an end, it does not have an absolute before and an absolute after, and it lacks a foundation and an established rule. The circle, as we have tried to explain, constitutes Prodi's model of semiotics. Semiotics that, in reality, aspires at doing

⁴² "Nel complesso, l'ipotesi che si propone è in contrasto con le teorie antropologiche ed etnografiche basate sulla assoluta originalità e primitività *irrazionale* del sacro, proprie di una fase rudimentale della civiltà. Esse prendono invariabilmente in considerazione un uomo già geneticamente istituito. Qui si vuole affermare invece che l'origine del sacro va anticipata alla fase della formazione razionale dell'uomo, cioè propriamente dei suoi caratteri differenziali specifici. Esso è contestuale alla logica e alla morale. Il sacro caratterizza il passaggio dal non-uomo all'uomo, e collabora a costruirne la specificità".

much more than just defining and determining the field of intentional and conscious signs use of, let alone human signs. Prodi uses the circle to show how, at the moment, human semiotics is the last phase of an evolution that with a total continuity, which however does not eliminate altogether the possibility of radical new experiences, refers back to natural semiotics, to those natural exchanges, that is material logic, which entail, and whose full meaning *is*, life. Life, in this respect, is intrinsically semiosis. Thus life, semiosis and material logic are biologically coextensive terms. Still, since human language, through the mediation of categorial logic, is the direct prosecution of worldly life, of natural semiosis, the very language is, through an evolutive identity, life. Hence, the circle comes a full way round and starts closing in for the possibility of language, which Prodi tell us is also knowledge, to *say* that the world derives from the fact that, in the end, language and the world share the same make-up. They are the same thing under different combinations⁴³.

The circle, however, becomes a spiral. An open spiral for if language is knowledge it is even capable, thanks to its aesthetic customs and therefore through hypothesis, to extend the world's boundaries since, as in so much as initial identity, language and world are coextensive. The evolution of the human world is, then, indefinitely open. As we have seen, this opening, this inherent possibility of extending the world's boundaries implies, straight away, and implies logically at that, the existence of an infinite spatial region beyond those borders, which Prodi calls "darkness". That is the unknown and unknowable region within which our language is not valid. A region, nonetheless, of which our world is not but a restricted portion that rests upon and originates from this very region. This region is what we could call God, even though it would refer to a strange type of God since it would be no person, it would concern neither an order nor a presence but if anything at all, instead, a kind of absence. It would be more of an emptiness that attracts us and makes us worry, while thrusting us to explore it and inquire about it. A God, granting that Prodi would have allowed such an improper use of this term in his semiotic reconstruction, in this respect, that would have given (paradoxically speaking, for we have excluded that it may be someone or something) us an assignment. A paradoxical assignment, actually, because it would deal with a duty that no one explicitly assigned. A task, indeed, that would

⁴³ As Lo Piparo (1999: 200) states "a theory on the world is a part of the world that observes the world".

grow spontaneously within the human animal and not from some external authority. Still a duty that arises from the evolutive depths of man, for his linguistic ability, as it has been already pointed out, is nothing but complicated and innovative development yet free of any elementary stalemates of semiosis and, hence, of life, itself, which, for Prodi, is essentially semiosis.

The task of knowing and thus naming things, then, would be an assignment that comes, precisely, not from the outside, that is, a world superior to our own. On the contrary, it is an issue that stems from us as in so much as we are animals, because we are radically linguistic animals. We are at the heart of the circle, and this is another paradox. Around the perimeter of the circle there is no center, no heart to be had: the duty that makes things want to know about other things, and therefore know themselves, is given to us by our very nature, and thus, by our own selves. Still, it seems as if the order came from somewhere else from here, that is elsewhere but at the same time coinciding with us. In the circle, tautologies seem to proliferate. Yet, there is no other possibility. If ontology is circular, then the question that seems to come from God, and asking for a response directed towards God, is born in the very circle, and comes from nature. In fact, and here is where tautology sums itself up to the point of disappearing, the human animal "is nature that thinks of itself, [it is] nature's inner life" (Prodi 1987: 93)⁴⁴.

References

- Buysse, Eric 1943. *Le langage et le discours*. Bruxelles: Off. de Publicité.
- Cairns-Smith, Alexander Graham 1999. Origine dei geni e struttura dei cristalli. In: Colombo, Roberto; Giorello, Giulio; Sindoni, Elio (eds.), *L'intelligenza dell'universo*. Casale Monferrato: Piemme, 64–73.
- Cimatti, Felice 2000a. *La scimmia che si parla. Linguaggio, autocoscienza e libertà nell'animale umano*. Torino: Bollati Boringhieri.
- 2000b. *Nel segno del cerchio: L'ontologia semiotica di Giorgio Prodi*. Roma: Il manifesto Libri.
- Eccles, John 1966. *Facing Reality: Philosophical Adventures by a Brain Scientist*. London: Harper & Row.
- Eco, Umberto 1973. *Segno*. Milano: Isedi.
- 1975. *Trattato di semiotica generale*. Milano: Bompiani.

⁴⁴ "È natura che si pensa, [è] l'interiorità della natura".

- Emmeche, Claus 1991. *Det Levende Spil: Biologisk Form og Kunstigt Liv*. København: Munksgaard (English transl.: 1994. *The Garden in the Machine*. Princeton: Princeton University Press).
- Lo Piparo, Franco 1992. Le signe linguistique est-il à deux faces? Saussure et la topologie. *Cahiers Ferdinand de Saussure* 45 [1991]: 213–221.
- 1999. Il mondo, le specie animali e il linguaggio. La teoria zoocognitiva del Tractatus. In: Carenini, M.; Matteuzzi, M. (eds.), *Percezione, linguaggio e coscienza: Saggi di filosofia della mente*. Macerata: Quodlibet, 183–202.
- McDowell, John 1994. *Mind and World*. Harvard University Press, Cambridge (Mass.) (Italian transl.: 1999. *Mente e mondo*. Torino: Einaudi).
- Prodi, Giorgio 1974. *La scienza, il potere, la critica*. Bologna: Il Mulino.
- 1977. *Le basi materiali della significazione*. Milano: Bompiani.
- 1982. *La storia naturale della logica*. Milano: Bompiani.
- 1983a. *L'uso estetico del linguaggio*. Bologna: Il Mulino.
- 1983b. Lingua e biologia. In: Segre, C. (ed.), *Intorno alla linguistica*. Milano: Feltrinelli, 172–202, 308–319.
- 1987a. *Alla radice del comportamento morale*. Genova: Marietti.
- 1987b. *Gli artifici della ragione*. Milano: Edizioni del Sole 24 ore.
- 1988a. Material basis of signification. *Semiotica*, 69: 191–241.
- 1988b. *Teoria e metodo in biologia e medicina*. Bologna: Editrice CLUEB.

Циркулярный семиозис Джорджио Проди

Семиотическая теория Проди возникает в ответ на радикальный вопрос: если знак — это кросс-референция, то чем гарантируется связь знака с объектом, к которому он отсылает? Проди отбрасывает все традиционные решения: осознанная интенция субъекта, конвенция, иконическая связь знака и объекта. Проди опровергает первый ответ, поскольку он опирается на совершенно таинственное понятие интенции. Конвенционалистский ответ также неудовлетворителен, так как распространяет на всю группу критерий, который не может быть объяснен и в случае единичного компонента. Наконец отвергается и иконический ответ, так как не объясняется понятие “сходства”, лежащее в основе концепта “иконичности”. Ответ Проди локализует модель семиотических отношений в фигуре круга. Круг — это жизнь, ничто иное как бесконечная цепь отношений перевода и узнавания во все более сложных системах. В круге нет ни начала, ни конца. У него нет ни основания, ни установленного закона. Он не содержит причины, которая может стать, в свою

очередь, следствием. Семиозис, таким образом, опирается на понятие жизни, ибо жизнь сама внутренне семиотична. Мы можем поместить мир в знаки, то есть познать его, так как сами являемся частью этого мира, который через нас познается. Наконец, как следствие нахождения внутри круга жизни-семиозиса, встает вопрос о том, что за пределами этого круга, — проблема и эстетическая, и религиозная.

Giorgio Prodi tsirkulaarne semioosis

Prodi semiootiline teooria tekib vastusena radikaalsele küsimusele: kui märk on rist-viitav, siis millega garanteeritakse märgi seos objektiga, millele ta viitab. Prodi heidab kõrvale kõik traditsioonilised lahendused: subjekti teadlik intentsioon, konventsioon, märgi ja objekti vaheline ikooniline seos. Prodi loobub esimesest, kuna see toetub üpris ebaselgele intentsiooni mõistele. Konventsionalistlik vastus on samuti ebarahuldav, kuna kriteeriumi, mida ei ole võimalik seletada üksikkomponendi puhul, laiendatakse tervele grupile. Lõpuks heidetakse kõrvale ka ikooniline variant, kuna “sarnasuse” mõiste, mis on “ikoonilisuse” aluseks, on lahti seletamata. Prodi vastus lokaliseerib semiootiliste suhete mudeli ringi kujul. Ring — see on elu, ei midagi muud kui tõlkimise ja äratundmise suhete lõputu ahel üha keerulisemates süsteemides. Ringil ei ole ei algust ega lõppu. Tal ei ole alust ega kindlaksmääratud seaduspärasust. Ta ei sisalda ühtegi põhjust, mis ei või omakorda muutuda tagajärjeks. Semioosis tugineb seega elu mõistele, kuna elu ise on oma olemuselt semiootiline. Me võime asetada maailma märkidesse, st tunnetada teda, kuna me ise oleme selle maailma osad, mida läbi enda tunnetame. Lõpuks kerkib selle elu-semioosise ringi sees olles küsimus: mis asub sellest ringist väljaspool? See on nii esteetiline kui ka religioosne probleem.

The semiotics of animal freedom: A zoologist's attempt to perceive the semiotic aim of H. Hediger

Aleksei Turovski

Estonian Marine Institute and Tallinn Zoo,
Paldiski mnt. 145, 13522 Tallinn, Estonia
e-mail: p.turovski@tallinnlv.ee

Abstract. The works, views and ideas of Heini Hediger (1908–1992), one of the most distinguished and influential zoologist of the 20th century, had and still have an enormous impact on contemporary understanding of animal behaviour. His views on territorial, social, etc. aspects of animal behaviour are based on semiotic concepts derived from Umwelt-theory (J. v. Uexküll) and combined with ideas from modern ethology. Hediger's special attention was devoted to the area of animal-man communications; he treated these problematic phenomena as a system of semiosis-processes, in a mainly holistic way. Hediger's approach inspires the author to propose a notion "the need for impression" to be used in zoosemiotic analyses.

My childhood dream, my lifelong wish, would have been fulfilled if it had really been possible to converse with animals.

H. Hediger (1985: 177)

There's a disadvantage in a stick pointing straight (because) the other end of the stick always points the opposite way. It depends whether you get hold of the stick by the right end.

G. K. Chesterton (1984: 221)

There have never been any difficulties in pointing out the signs of captivity: the bars and gratings, the fetters and shackles, the nets and traps: signs of obstacles, hindrance and limitations of any kind will

certainly do. But it is not at all easy to find a universally acceptable and generally comprehensible symbol even of human freedom, so what could serve us as a sign of animal freedom? The image of an animal moving freely is a sign of escape rather than that of a free life *par excellence*. The general notion of a free animal has always been something of vague perception of a completely undetained creature, imperceptible though certainly dwelling somewhere in the wild.

It is hard to believe in our time, but it seems that Heini Hediger (1908–1992) really was the first zoologist who realized that there is no such thing as an animal that is free in anthropomorphic sense: “the free animal does not live in freedom: neither in space nor as regards its behaviour towards other animals (Hediger 1964). Animals in the wild are “bound by space and time, by sex and social status” (Hediger 1985: 158). If we consider now that Hediger also elaborated on the distinction between nest and home, the former being a repository for eggs and raising the young” ... and the latter “a place of refuge, which is the function of the home” (Hediger 1985: 178), it becomes quite clear, for a zoologist at least, how Hediger approached the phenomena of animal life. He did it from within, treating the living world as the *Umwelt* in Jakob von Uexküll’s sense.

To Uexküll Hediger dedicated his study on tameness (Hediger 1935). He was a friend and admirer of Jakob von Uexküll and Thomas A. Sebeok, but was he a semiotician? As far as I know, he was a zoobiologist and field zoologist in the first place, deeply involved in zoopsychological and behavioural studies, friend and adherent of K. Lorenz and N. Tinbergen, though not an ethologist proper (Hediger 1985: 178–179). Having enormous experience in ecology of animal behaviour both in the field and in captivity, Hediger doubted the somewhat rigid interpretations of the instinct, the ritualistic behaviour in the first place, adopted by ethology as a science of species-specific behaviour of animals. Indeed, the vast diversity of deviations from the main schemes of instincts within one and the same species, the flexibility and continuity of the adaptive behaviour of animals give us reason to believe, that the individual organism itself is the most active interpreter of the innate mechanisms of behaviour and that the main matrix on which these interpretations evolve during the ontogenesis is the semiosphere. Hediger distrusted “the accepted evolution theory” not accepting the claim that the “two major constructors of speciation are mutation and selection” (Hediger 1985: 179). And Hediger certainly was not a behaviourist in classical sense. It is my conviction

that, in all his studies, especially “The Clever Hans phenomenon from an animal psychologist’s point of view” (Hediger 1981), Hediger operated with conceptual notion-instruments ‘*signum–structure*’ in the cases where the behaviourism would apply the famous ‘*stimulus–reaction*’ scheme instead. In all his studies and encounters with animals in the field and in the zoo Hediger’s attention was driven to the biological meaning of the signal — an impulse of information passing between animal and other components of the Umwelt, including all human factors as well. This reminds me of what my father Markus Turovski, a philosopher, once said to me about his attitude to living things: “If I were told that an octopus can talk in, say, English or Russian, I would consider it simply as a fact of its personal biography. What it is talking about is the only thing that matters to me”.

Thomas A. Sebeok describes Hediger as a “visionary innovator who reached from the inside outwards entirely comfortable within Jakob’s [von Uexküll — A. T.] Umwelt paradigm, but implicitly with (zoo) semiotics too, which he came increasingly and quite explicitly to embrace” (Sebeok 2001). Sebeok highly values Hediger’s works on territorial and social behaviour, especially his concepts of ‘individual distance’ and ‘home range’ together with distinguishable ‘territorial idiolects and dialects’ as characteristics for the communicative patterns of the species sharing a home range, and also Hediger’s views on hierarchy and dominance in animal social status, on parental care and other forms of communicative stimulation/inhibition activities. In these concepts as well as in all his logically extremely coherent works, Hediger is estimated by Sebeok as a true zoosemiotician whose works offer materials and ideas of great importance for semiotics of all scientific trends, — anthropological, perhaps, in the first place (Sebeok 1972: 172–173; 1989: 5, 55; 1990: 107, 124).

Hediger, though he perhaps probably did not call himself a semiotician, obviously worked like one. And following the aim of his works, we could describe the free animal as a representative of a particular species, active in its specific semiosphere as part of the Umwelt. The contacts (and conflicts) between an animal and human culture, and furthermore between its species and civilization could be then understood as interactions between animal and human semiospheres, so the main aspect of these interactivities is the dynamics of attention on both sides.

In “Communication between man and animal” (Hediger 1974), “Man as a social partner of animals and vice-versa” (Hediger 1965),

"Wild Animals in Captivity" and many other studies Hediger emphasizes the absolute necessity of understanding the actual animal-man encounter situations by their signs as examined from animals' point of view in the first place, in order to find optimal means of control. "People never answer what you say. ... They answer what they think you mean" (Chesterton 1984: 76). Actually animals act in the same way and it is, essentially, up to the inquisitive interrogator — the man, to arrange "the questionnaire" by meanings, that is, to formulate it semiotically in elaborated sets of signs, fitted in to the space-time structure of the semiosphere of particular animal species. In the course of a life time, that is in embryonic, postnatal, juvenile, subadult, adult/imagial-sexually mature and postmature periods an animal passes through a succession of very different behavioural stages of orientation to other animals (and man) as objects of its attention. One of the important attitudes in this process besides the motivational attitudes to resources, foes, sexual partners, social ranks, broods etc., is the fulfilment of the need to be impressed by changing signals — impulses of information from the environment, otherwise indifferent in the aspects of major biological needs/functions. The matrix structure of the semiosphere of the animal obviously transforms these signals into signs in accordance with the prevailing motivations; so the forms of the *Umwelt* become semiotically involved in unique personal experience of the animal in dependence on its ontogenetic age-period. Such a 'need for impression' is presumably coupled with the need to impress and thus to provoke feedback signals which also contribute to the process of semiosis. Man has been making use of the need for impression, calling it "natural curiosity" of animal, in taming and domestication.

Apparently there is no such thing as a "free population", to say nothing of "a free species". But a free animal could, perhaps, be usefully imagined as a healthy member of a healthy population of a certain species dwelling in such part of the land- or seascape which is safe from foes but promising in resources as far as this animal can recognize by its semiotic means within the range and limitations of its sensorics. Or, to make long story short, free is an animal for which the fulfilment of the need for impression is granted by the functional structure of the semiosphere.

For a free animal, the best way to avoid encounters with all and any possible enemies is assumably to make itself imperceptible, to dissolve semiotically into its habitation, become undetectable. But this

can be effective no longer than the event of disclosure happens. From this moment on the next necessary and diligent course of action is either to flee or, if the escape is impossible or of dubious effect —, to kill or scare the enemy off, or to gain time by stunning it, making it to hesitate even for a moment.

Presumably, the best way to do this is to produce such a complete set of the signs of danger, as to force every particular enemy to choose by itself the most horrifying pattern in accordance with its specific properties and personal experience. That can be done to any animal species because all forms of animal life are united semiotically by the **need for impression**. Quite convincing evidence of the importance of this need in case of humans could be easily found by approximate estimation of the numbers of horror films addicts. In the well known scheme of the mimicry the most active, essential role belongs to the “dupe”. The “dupe” is the actual decider on the course of events and final results in all situations where camouflage, mimicry and other suchlike phenomena are involved. So, it is the “dupe” to whom the set of repelling patterns of form and behaviour is offered to make its own choice what particular sign to be scared of. And it is ecologically essential that the life of the dupe must be preserved (e.g., Martens mimicry clearly shows in case of deadly coral snakes that they are mimics, but not models), for a dead dupe can neither learn, nor pass the knowledge. Semiotically man holds the unique position in the Umwelt, viewed in the aspect of mimicry in “hide, seek, scare and catch” games, because man could rationally take on any or all of these roles at the same time, avoiding being duped. That gives humans the most advantageous position as hunters, tamers, domesticators, and a most perilous exterminators as well. Unless I am very much mistaken, such was the main concern of Heini Hediger as a zoologist, zoo director and a man to whom the communications with animals and zoological studies were at least equally important. This dualistic attitude could probably be marked as romantic, but it certainly is semiotic.

If I may be allowed a lyrical reminiscence, Hediger's inclination to approach life problematics “from within” reminds me of Geheimer Archivarius Lindhorst, actually a Salamander (Fiery Spirit of Nature), the most powerful character in Hoffmann's “Der goldne Topf” (Hoffmann 1814), whose principle was to act always “from within out” in order to restore the harmony between man and Nature.

All my personal experience obtained in 28 years with animals in Tallinn Zoo indicates clearly that the main and very first concern of an

animal that finds itself outside its enclosure is to ensure the safest and straightest way back home. This home as it is pointed out above is in Hediger's sense a place for refuge. But to recognize the **home from outside** could be extremely difficult for an animal (and also for human as it happens in various situations), accustomed to experience the world strictly **from within**. So the animal is always most grateful (or at least we can say: relieved) for any assistance from the part of humans (or other animals, e.g. dogs), which are considered by the animal as its conspecifics, if the animal is tamed or properly acquainted with man. Generally speaking, humans could find themselves in very similar but reversed situation in the nearest future. Until recent years the concept of civilization for the majority of at least Western Europeans has obviously been based on the conviction that the landscape is something extremely stable and unchanging "by itself". Now, with the global warming and other suchlike troubles it seems to be possible that people would find themselves on the "outside" from their home and with anxious expectations that just animals will "show the way back inside". I think that such would have been H. Hediger's feelings nowadays.

As for Hediger's doubts about the synthetic theory of evolution, those I think were based mainly on such observable events as the preference given by females to childlike or otherwise deviated males instead of some very masculine ones, the general infantilization and sexual acceleration in zoo animals (but not only them), on striking importance of imprinting combined with games and teaching in raising the young in predatory mammals and birds (but also some fish and even insects, e.g. *Passilidae*, *Coleoptera*), and on the vast variability in communication patterns in animal behaviour. But, as all the scientific legacy of Hediger, this topic needs further studies. Reproductive isolation may occur within a population due to behavioural particularities of single organisms. It is well known that in some cases females prefer the males clearly deviated from the median pattern of behaviour, e.g. wasps *Mormoniella vitripennis* (White, Grant 1977), *Drosophila* sp. sp. in the phenomenon of asymmetric evolution on Hawaii islands (Lambert 1984), though, as a rule, female mate choice favours symmetrical males in such different species as barn swallows (*Hirundo rustica*), earwings (*Forficula auricularia*), humans (*Homo sapiens*) and many other (Polack 1997). From my part, the study of the possibilities to apply the Baldwin principle in the analyses of zoosemiotic views of Hediger seems to be very promising. In this field especially interesting would be to try the application of K. Kull's ideas

on Osborn-Baldwin effect (Kull 2000). According to his interpretation of this effect, “the activity of an organism as a subject may play a role as an evolutionary factor” (Kull 2000: 53).

One must not expect to have a powerful and beautiful waterfall without the river. Such expectations can never arise where the Umwelt theory is semiotically correctly applied as it was always done by Dr. Heini Hediger in all his studies.

References

- Chesterton, Gilbert Keith 1984. *The Penguin Complete Farther Brown*. London: Penguin Books.
- Hediger, Heini 1935. Zählung und Dressur wilder Tiere. *Cibz. Zc. Basel* 3: 27.
- 1964. *Wild Animals in Captivity: An Outline of the Biology of Zoological Gardens*. New York: Dover Publ.
- 1965. Man as a social partner of animals and vice-versa. *Symposia of the Zoological Society of London* 14: 291–300.
- 1974. Communication, between man and animal. *Image Roche (Basel)* 62: 27–40.
- 1981. The Clever Hans phenomenon from an animal psychologist’s point of view. *Annals of the New York Academy of Sciences* 364: 1–17.
- 1985. A lifelong attempt to understand animals. In: Dewsbury, D. A. (ed.), *Leaders in the Study of Animal Behavior: Autobiographical Perspectives*. Lewisburg: Bucknell University Press, 144–181.
- Hoffmann, Ernst Theodor Amadeus 1814. *Fantasiestücke in Callots Manier*, Bd. 3. Berlin: Kunz Verl.
- Kull, Kalevi 2000. Organisms can be proud to have been their own designers. *Cybernetics and Human Knowing* 7(1): 45–55.
- Lambert, David M. 1984. Specific-mate recognition systems, phylogenies and asymmetrical evolution. *Journal of Theoretical Biology* 109(1): 147–156.
- Polak, M. 1997. Parasites, fluctuating asymmetry, and sexual selection. In: Beckage, Nancy E. (ed.), *Parasites and Pathogens: Effects on Host Hormones and Behavior*. New York: Chapman & Hall, 246–276.
- Sebeok, Thomas A. 1972. *Perspectives in Zoosemiotics*. The Hague: Mouton.
- 1989. *The Sign and its Masters*. London: University Press of America.
- 1990. *Essays in Zoosemiotics*. Toronto: University of Toronto.
- 2001. Biosemiotics: Its roots, proliferation, and prospects. *Semiotica* (special issue about Uexküll, forthcoming).
- White, H. C. and Grant, B. 1977. Olfactory cues as a factor in frequency-dependant mate selection in *Mormoniella vitripennis*. *Evolution* 31(4): 829–835.

Семиотика животной свободы: попытка зоолога понять семиотическую цель Х. Хедигера

Работы, взгляды и идеи Хейни Хедигера (1908–1992), одного из наиболее известных и влиятельных зоологов 20 в., имели и до сих пор имеют огромное значение для современного понимания поведения животных. Его взгляды на территориальные, социальные и другие аспекты поведения животных основаны на семиотических концептах, заимствованных из Umwelt-теории (Я. Юкскуль) и соединенных с идеями современной этологии. Особое внимание Хедигер уделял коммуникации животного и человека: он рассматривал это проблематичное явление прежде всего холистически как систему процессов семиозиса. Хедигеровский подход побудил автора исследования предложить для использования в зоосемиотических исследованиях понятие “потребность впечатления”.

Loomse vabaduse semiootika: zooloogi katse mõista H. Hedigeri semiootilist eesmärki

Heini Hedigeri (1908–1992), ühe 20. sajandi tuntuima ja mõjukama zooloogi tööd, vaated ja ideed omasid ja omavad siiamaani suurt tähtsust loomade käitumise mõistmisel. Tema vaated loomade käitumise territoriaalsetele, sotsiaalsetele ja muudele aspektidele toetuvad semiootilistele kontseptidele, mis on tuletatud Jakob von Uexkülli maailma teooriast ning on täiendatud kaasaegse etoloogia ideedega. Erilist tähelepanu pööras Hediger inimese ja looma vahelisele kommunikatsioonile, vaadeldes seda probleemset nähtust eelkõige holistlikust vaatepunktist kui semiootilise protsesside süsteemi. Hedigeri lähenemine inspireeris käesoleva uurimuse autorit pakkuma välja zoosemiootiliste analüüside tarbeks mõiste “muljete tarve”.

Sharing G. Evelyn Hutchinson's fabricational noise

Myrdene Anderson

Dept. of Sociology and Anthropology, Purdue University,
West Lafayette, Indiana 47907-1365, USA
e-mail: myanders@ecn.purdue.edu

Abstract. One of the seminal constructs in 20th-century biosemiotics is G. Evelyn Hutchinson's 'niche'. This notion opened up and unpacked cartesian space and time to recognize self-organizing roles in open, dynamical systems — in *n*-dimensional hyperspace. Perhaps equally valuable to biosemiotics is Hutchinson's inclusive approach to inquiry and his willingness to venture into abductive territory, which have reaped rewards for a range of disciplines beyond biology, from art to anthropology. Hutchinson assumed the fertility of inquiry flowing from open, far-from-equilibrium systems to be characterized by 'fabricational noise', following Seilacher, or 'order out of chaos', following Prigogine. Serendipitous 'noise' can self-organize into information at other levels, as does the 'noise' of Hutchinson's contributions themselves.

An ecology of, by, and for, an ecologist

Spectacular, seminal, searching minds — as that gracing George Evelyn Hutchinson (1903–1991) — do not emerge in every field, in every generation, in every culture, with any regularity, and when they do they defy every orderly principle. Of logic. Of comprehensibility. Of coherence. Such minds, and their works, emerge more willy-nilly, evoking evolutionary surprise in their observers and for their authors as well, rendering their occasional more linear, predictable, developmental contributions equally surprising, rather than suspenseful, as would otherwise be the case.

The majority of researchers in any field are naturally apt to work in that appropriately-labelled discipline, and to communicate within its circumscribed discourse. Such usual, developmental discourse builds incrementally, linearly, and, at least in hindsight, predictably — corresponding to so-called gradual evolution, where difference is quantitative or one of degree. In contrast, the Hutchinsons in any discipline dart and wander around and beyond its boundaries. Intellectual peregrinations sometimes destabilize the received wisdom of an otherwise comfortable, orderly field. Periodically, though, collective understanding reorganizes with a surprising leap, in substance or direction — the analogue of punctuated evolution, a qualitative difference in kind. These metaphors of evolution and development in semiotic systems are drawn from Stanley Salthe (Salthe 1993, Salthe and Anderson 1989). I fancy Hutchinson would resonate with these metaphors as well.

The playful properties of Hutchinson license me, perhaps, to deal with him as subject and object in a strolling, trolling, manner. Or perhaps the situation is not one of license but rather an imperative. Either way, I take liberties. I take liberties with the slices of Hutchinson making up this salmagundi, and I take liberties with the strictures and structures of English style. To some extent, I address this document to Hutchinson as well. Like many of his essays, this one is in cant: oblique, liling, intimate, inviting complementation and contest. Semiotician that he was, Hutchinson will find the beat and follow the intersecting spirals I trace in his *oeuvre*. In another life, I can make amends, and emendations.

Ushering out, ushering in

I was an usher, that's all. An usher at Hutchinson's memorial service. An ethnographer, too, you might say. That was at Yale's Battell Chapel, 19 October 1991, following Hutchinson's death in England on 17 May 1991. One hundred twenty days earlier, in early January 1991, I had watched sadly as Hutchinson left New Haven to visit, if not to remain in, his native England (Anderson 1998). Five years before his departure and death, he received the second Kyoto Prize in basic sciences. Eight years earlier, there had been a grand celebration of Hutchinson's 80th birthday at Yale's Peabody Museum. Twelve years earlier, on 24 October 1979, Hutchinson received the Franklin Medal of the Franklin Institute in Philadelphia for Development of the Scientific Basis of Ecology.

Closing his address to the Franklin Institute on the above occasion, he wrote:

Finally, since it has been said that nothing I say is wholly serious, I would like in this vein to express a hope that the honor you have done me is a tribute not only to partly forgotten and largely collaborative researches but also, in a minor way, to one or two more playful and ornamental exercises which I think may have given occasional pleasure to some of you. (Hutchinson 1979b: 4)

Eighty-eight years before his death, Hutchinson was born, 30 January 1903, in Cambridge, England. Hutchinson proceeded to study and be studied in Cambridge, Naples, Johannesburg, Tibet, numerous frothy ponds and illuminated manuscript archives, and Yale.

Contemplating Hutchinson today benefits from his, and our, willingness to wander, to trace the macramé of his mentation. Read aloud any of his work, and you will hear Hutchinson's voice. His experience and experiences imbue all of his writing with his personal touch and breath, and this is emphatically so with respect to his autobiographies: *The Ecological Theater and the Evolutionary Play* (1965) and *The Kindly Fruits of the Earth: Recollections of an Embryo Ecologist* (1979a).

Strolling and trolling with and without G. Evelyn Hutchinson

Like so many others of his generation, Hutchinson was precocious in early publication and prolific thereafter, and more and more eclectic with time. His bibliography published in *Limnology and Oceanography* 16(2) (March 1971) and 36(3) (May 1991) records Hutchinson's very first article, in 1918, titled 'A swimming grasshopper'. Hutchinson shared his research — on particular aquatic creatures (1968), populations and communities (1978a), species relationships (1954), bodies of water (1957), and chemical cycles (1948a) — with limnologists; but he also reported on science itself (1983), on biology generally (1948b), on taxonomy (1966), on larger ecological dynamics (1948c), on human evolution (1959a), on human culture (1955), on gender (1973a, 1973b), on art (1963, 1978b), on ethics (1948c), and on issues concerning global survival (1948c). By 1943, when his 'Marginalia' contributions were regularly featured in *American Scientist*, Hutchinson's wide-angled vision enlightened many across the

broadest range of academic disciplines. He was generous in his critical reviews of cutting-edge books, and in his obituary essays commemorating departed colleagues. At the same time, Hutchinson shared his surviving circle of intellectual friends with others, making it possible for his students to read a variety of manuscripts in process and even to engage eminent scholar-scientists in correspondence. Hutchinson assumed that real scientists were scholars and vice-versa. Just as he was fascinated by phenomena at every scale and of every description, his collegial generosity knew no bounds.

What rendered Hutchinson's scholarly-scientific contributions particularly semiotic was his insatiable curiosity leading him to disregard or dispute traditional boundaries of research or of discourse, even in his own formulations. In the winter of his life, just before the spring of his death in 1991, he was asked about what singular problem we inherit at the end of the twentieth century; he instantly replied, 'insides and outsides' (Anderson 1998: 235). Among other things, this had relevance for the spatial and energetic parameters once pertaining to niche, even when referenced to n-dimensional hyperspace. Thereby, niche could connote a sophisticated space bounded by edges, beyond which there was no 'outside', enclosing an 'inside' distilled down to n-dimensional components. The elucidation of the concept of niche moved, in Hutchinson's mind, from analytic to synthetic, from extrinsically closed and concrete to intrinsically open and relational, from physical to semiotic, or, to borrow from Rosen (1991), from syntactic to semantic. The relational entails roles, in biology as well as in society, and roles construct emergent meanings rather than being the precipitates of extrinsic measurables.

While strolling and trolling himself, Hutchinson routinely turned every incident and observation along his path into meaningful relations with other phenomena. This he acknowledged in his lecture occasioned by the Kyoto Prize in 1986, which essay he titled 'Keep Walking' (Hutchinson 1986), quoting and crediting the advice he received from an indulgent editor. The gist of this essay was that ordinary evolutionary wandering folds into developmental trajectories, surprise fertilizes suspense, means can become ends, medium may be message, and chaos can sort itself into provisional order... and vice versa, Möbius-fashion. All of this Hutchinson subsumed as 'fabricational noise', a phrase he adopted from a narrower usage by Seilacher (1974). Fabricational noise also describes the self-organizational behavior in far-from-equilibrium systems (Prigogine and Stengers

1979/1984), whether developmental or evolutionary, and is consonant with his student Slobodkin's characterization of evolution as 'existential poker' (Slobodkin 1968).

Hutchinson's adopted philosophy of 'keep walking', of strolling and trolling, recalls the equally magnificent metaphor deployed by Jakob von Uexküll in his, 'A stroll through the world of animals and men; a picture book of invisible worlds' (Uexküll 1957). Great minds, no doubt, stumble onto great metaphors as they stride.

Relationships, perspectives, and invariance

Hutchinson's approach to biosemiotics emphasized relationships (e.g., the roles eventually constituting 'niche') and holism (e.g., his compulsive inclusive integration of context with content). These inclinations cross-fertilized. Consequently, neither figure nor ground were fixed. About niche, Hutchinson ventured that critics may conclude it is 'compounded of equal parts of the obvious and the obscure' (1957: 416). And no interrogation of biological process could exclude the human interrogator together with his/her culture, language, and personality. Although bringing in gender in the marked hybrid possessive pronoun 'his/her' sounds inelegant, and consequently un-Hutchinsonian, he was truly fascinated by gender and how it played itself out in both society and science — witness his generous reviews of the works of his friend, Rebecca West (e.g., 1987), whose four-footed cane he inherited and relied on for his strolling and trolling during the final five years of his life.

While known as an ecologist, in Hutchinson's practice of ecology there was no exclusion of ethology (1957, 1969). If we assume ecology to focus on the largely extrinsic material/energetic grounds relating some units of analysis, and ethology to consist in the overlapping and complementary behavioral roles, largely informatic, of and between some units of analysis (Anderson et al. 1984) — then it's clear that ecology and ethology are more than sibling disciplines; they are more like Siamese twins, but not just connected to each other, either. Semiotics entirely problematizes the traditional crutch of units of analysis.

Hutchinson's ecology, moreover, approached its subject matter from both the micro-experimental, descriptive level and the macro-statistical level seeking general laws, such as that obtaining between population density and body size. His strolls took him into realms of-

ten considered incommensurable: the micro, the meta, the macro; the chemical, the biological, the cultural; the inductive, the deductive, the abductive; scale, rhythm, symmetry (1957).

Invariant among and between all of Hutchinson's contributions is the foregrounding of the provisionality of any and all units of analysis. Any units (molecule, gene, cell, organism, population, species, ecosystem-not to mention niche) are necessarily tentative or elusive, even as they are constituted *vis-à-vis* other formal units and within overarching temporal situations and spatial contexts. More persuasive units will not be spatial or energetic entities, but processual integrations also relating informatics and time, and/or any other dynamics which help consolidate our always interim understanding. While the significance of any description, analysis, or synthesis is at best provisional, given the infinite deferral inherent in meaning-making, Hutchinson insisted that it was nonetheless imperative to be bold in the exercise of semiotic inquiry. Humans can and must build on and simultaneously challenge if not deconstruct accumulations of received wisdom packaged as knowledge.

In pursuit of competition, cooperation, and creativity

Biologists working with conventional models have taken process to be increasingly knowable, predictable, mappable. For example, complexity lends itself to be tamed by assumptions of closed-system competition through natural (or even artificial) selection. Hutchinson was among the earliest to find as suspect the overdetermined natural selection narratives of competition (1948b). He preferred to take into account obvious conditions of cooperation and allow for the opacity and transparency of both chance and necessity — and of ignorance.

One can speculate that Hutchinson's own personal habits of cooperation leaked into his analysis of various outcomes of biological process. Projection, after all, may be rampant in human cognition, and as such is certainly natural. In considering cooperation, leading to coevolution, biological process becomes more complex and nuanced-and more realistic and interesting.

Hutchinson could productively ratchet between the most improbable of sources and resources. Theorizing for him was an autotelic activity, resembling perhaps the self-rewarding compulsions of alloprimates afforded paints and canvas or musical instruments, who effortlessly go on to create designs in space and sound appealing to our sensibilities (1963: 107).

For all his penchant for creativity, Hutchinson allowed some role for selection. Consider this: 'It is not necessary in any empirical science to keep an elaborate logicomathematical system always apparent, any more than it is necessary to keep a vacuum cleaner conspicuously in the middle of a room at all times. When a lot of irrelevant litter has accumulated the machine must be brought out, used, and then put away' (Hutchinson 1957: 416). This observation predates Kuhn (1962), and is much more graphic and satisfying!

As can be appreciated, Hutchinson was simultaneously humble and bold. Sometimes a well-meant scholar or student would venture to utter that Hutchinson was the 'father of ecology', whence Hutchinson — reflecting on his own fabricational noise — would usher out the admirer, and mutter, 'No, that would be Darwin'.

References

- Anderson, Myrdene 1998. Apoptosis, the eradication of old ideas, and the persistence of weeds. *Semiotica* 120(3/4): 231–241.
- Anderson, Myrdene; Deely, John; Krampen, Martin; Ransdell, Joseph; Sebeok, Thomas A. and Uexküll, Thure von 1984. A semiotic perspective on the sciences: Steps toward a new paradigm. *Semiotica* 44: 7–47.
- Hutchinson, G. Evelyn 1948a. Circular causal systems in ecology. *Annals of the New York Academy of Sciences* 50, 221–246.
- 1948b. Biology. In *Encyclopaedia Britannica*. Reprint, 14 pages.
- 1948c. On living in the biosphere. *The Scientific Monthly* 67(6): 393–398.
- 1952. Methodology and value in the natural sciences in relation to certain religious concepts. *The Journal of Religion* 32(3): 175–187.
- 1954. Theoretical notes on oscillatory populations. *The Journal of Wildlife Management* 18(1): 107–109.
- 1955. Marginalia: Coda. *American Scientist* 43: 144–147.
- 1957. Concluding remarks. *Cold Spring Harbor Symposium on Quantitative Biology* 22: 415–427.
- 1959a. A speculative consideration of certain possible forms of sexual selection in man. *American Naturalist* 93(869): 81–91.
- 1959b. Homage to Santa Rosalia, or, Why are there so many kinds of animals? *American Naturalist* 93: 145–159.
- 1963. The naturalist as an art critic. *Proceedings of the Academy of Natural Sciences of Philadelphia* 115(5): 99–111.
- 1965. *The Ecological Theater and the Evolutionary Play*. New Haven: Yale University Press.
- 1966. The sensory aspects of taxonomy, pleiotropism, and the kinds of manifest evolution. *American Naturalist* 100(915): 533–540.

- 1968. When are species necessary? In: Lewontin, Richard C. (ed.), *Population Biology and Evolution*. Syracuse: Syracuse University Press, 177–186.
- 1969. Ecological biology in relation to the maintenance and improvement of the human environment. In: *Applied Science and Technological Progress: A Report to the Committee on Science and Astronautics, U.S. House of Representatives, by the National Academy of Sciences*, 171–184.
- 1973a. Population and behavior. In: Williams, Preston N. (ed.), *Proceedings of a Symposium on the Identity and Dignity of Man*. Cambridge, Massachusetts: Schenkman Publishing Company, 120–123.
- 1973b. Problems of population control. In: Williams, Preston N. (ed.), *Proceedings of a Symposium on the Identity and Dignity of Man*. Cambridge, Massachusetts: Schenkman Publishing Company, 151–152.
- 1978a. *An Introduction to Population Ecology*. New Haven: Yale University Press.
- 1978b. Zoological iconography in the West after A.D. 1200. *American Scientist* 66(6): 675–684.
- 1979a. *The Kindly Fruits of the Earth: Recollections of an Embryo Ecologist*. New Haven: Yale University Press.
- 1979b. *Untitled address to the Franklin Institute, Philadelphia, 24 October 1979, upon receipt of the Franklin Medal, for Development of the Scientific Basis of Ecology*. Stencil manuscript.
- 1983. Marginalia: What is science for? *American Scientist* 71(6): 639–644.
- 1986. Keep walking. [The lecture upon receipt of the Kyoto Prize 1986 (Basic Sciences) awarded to G. Evelyn Hutchinson.] *Physiological Ecology of Japan* 24: 81–86.
- 1987. Rebecca West. *The Yale Review* 76: 203–205.
- Kuhn, Thomas S. 1962. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press.
- Limnology and Oceanography* 1971, 1991. G. Evelyn Hutchinson Celebratory Issue. [*Limnology and Oceanography* 16(2): 157–179, 473–477 (March 1971) bound as reprint with *Limnology and Oceanography* 36(3) (May 1991).]
- Prigogine, Ilya; Stengers, Isabelle 1979/1984. *Order Out of Chaos*. Trans. from the French. New York: Basic Books.
- Rosen, Robert 1991. *Life Itself: A Comprehensive Inquiry Into the Nature, Origin, and Fabrication of Life*. New York: Columbia University Press.
- Saithé, Stanley N. 1993. *Development and Evolution: Complexity and Change in Biology*. Cambridge: MIT Press.
- Saithé, Stanley N.; Anderson, Myrdene 1989. Modeling self-organization. In: Prewitt, Terry J.; Deely, John and Haworth, Karen (eds.), *Semiotics 1988*. Lanham: University Press of America, 14–29.
- Seilacher, Adolf 1974. Fabricational noise in adaptive morphology. *Systematic Zoology* 22: 451–465.

- Slobodkin, L. B. 1968. Toward a predictive theory of evolution. In: Lewontin, Richard C. (ed.), *Population Biology and Evolution*. Syracuse: Syracuse University Press, 187–205.
- Uexküll, Jakob von 1957. A stroll through the world of animals and men; a picture book of invisible worlds. In: Schiller, Claire H. (ed.), *Instinctive Behavior: The Development of a Modern Concept*. New York: International Universities Press, Inc., 5–80.

Разделяя “фабрикационный шум”

Г. Ивлина Хатчинсона

Один из продуктивных конструкторов биосемиотики 20 в. — “ниша” Г. Ивлина Хатчинсона. Это понятие раскрыло картезианское пространство и время, что повлекло за собой признание самоорганизации в открытых динамических системах, в n -мерном гиперпространстве. Возможно, не менее ценен для биосемиотики инклюзивный подход Хатчинсона к исследованию и его готовность покорять новые территории, что вознаграждается во многих дисциплинах за пределами биологии, от искусствovedения до антропологии. Хатчинсон предполагал, что плодотворность исследования проистекает из открытых, неравновесных систем, характеризующихся “фабрикационным шумом” по Зейлахеру, или “порядком из хаоса”, по Пригожину. Открывательский “шум” может самоорганизовываться в информацию на других уровнях, так же как “шум” открытий самого Хатчинсона.

Osasaamine G. Evelyn Hutchinson'i

“valmistusmürast”

Üks 20. sajandi biosemiootika produktiivsetest konstruktsioonidest on G. Evelyn Hutchinson'i “nišš”. See mõiste avas kartesiaanliku ruumi ja aja, mis tõi endaga kaasa enesereguleerimismehhanismi tunnistamise avatud dünaamilistes süsteemides, n -mõõtmelises hüperruumis. Võimalik, et mitte vähem tähtis biosemiootika jaoks on Hutchinsoni inklusiivne lähenemine uurimistöele ja tema valmidus hõlvata uusi territooriume, mis on andnud tänuväärseid võrseid paljudel bioloogias väljapoole jäävatel aladel kunstiteadusest antropoloogiani. Hutchinson arvas, et uurimuse tulemuslikkus tuleneb avatud, tasakaalustamata süsteemidest, mida ise loomustab “valmistusmüra” (Seilacheri termin) või “kord kaosest” (Prigogine). Avastuslik “müra” võib iseorganiseeruda informatsiooniks teistel tasanditel, samuti nagu Hutchinsoni enese avastuste “müra”.

Steps towards an ecology of cognition: A holistic essay

Sabine Brauckmann

Elisabeth-Ney-Str. 1, D-48147 Münster, Germany

e-mail: brauckm@uni-muenster.de

Abstract. The essay informs on Gregory Bateson's holistic approach towards an epistemic view of nature. The ecology of mind relies upon a biological holism serving as a methodic tool to explain living "phenomena", like, e.g., communication, learning, and cognition. Starting from the *idea*, the smallest unit of information, Bateson developed a type hierarchy of learning that is based on a cybernetic view of mind. The communication model focuses on paradoxes caused by false signification. It leads to a pathogenesis of schizophrenia that is subsumed under the conception of double binds. This ecosystemic perspective of living processes represents a truly (w)holistic theory of nature.

In spring, when woods are getting green,

I'll try and tell you what I mean. [...]

In autumn, when the leaves are brown,

take pen and ink, and write it down.

Humpty-Dumpty's song (Carroll 1899: 129)

Some preliminary remarks on holism

It was in spring 1998 when I gave a series of lectures on holism in the sciences covering physics, mathematics and biology at the Institute of Semiotics in Tartu.¹ It culminated in a discussion of Gregory

¹ My thanks belong to Peeter Torop and Kalevi Kull who invited me to this adventurous task. Without the patience and tolerance of the audience, the students of semiotics, I could not have fulfilled it. Their awareness was more than encouraging.

Bateson's cybernetic approach towards a holistic epistemology that focuses on us humans, and how we cope with our environment, or know about it. Since then time has past, and I am still thinking about holism and its impact on the natural sciences, particularly on the biological sciences. Now it is autumn 2000, and I will discuss this crucial issue again, but this time with pen and paper instead of chalk and blackboard.²

The objective of my lectures series was to show the virtue of shifting from ontology to epistemology and backwards by the means of a concept named *holism*. For historians and philosopher of science there does not exist any doubt, that this concept was and, maybe still is, at the centre of fundamental changes in various areas of philosophy and the sciences in the 20th century. Some versions of holism that deal with intentional phenomena are widespread among analytic philosophers subsequent to the work of Ludwig Wittgenstein and Quine's "Two Dogmas of Empiricism". For the sciences holism is considered as an option as, for example, the Copenhagen interpretation of quantum mechanics, Gestalt theory of psychology or the organismic view of biology have shown. The biological holism that is particular of interest for my own research on theoretical biology, intended to refute or, at least, to correct the strong version of genetic determinism which became a paradigm for biological sciences. Opting for holism in any of these areas has far-reaching consequences for our view on nature and ourselves as well. In general, the point of my inquiry into the different forms of holism is to assess their impact on the development of the natural sciences.

The biological holism of the 20th century continued a controversy that started in the 19th century. The point of departure was the crucial issue, whether organisms are (physical) machines, or whether they exhibit properties that cannot be described by physico-chemical methods and principles. This question was initiated by the Cartesian statement that the laws of nature are identical with the ones of classical mechanics. A fundamental feature of the mechanistic way of thinking is a reductionism filtering out complex events of nature to singular states or processes to investigate them with the techniques of physics and mathematical methods.

² As this is mere an essay, I consciously avoid to bother the reader with the extensive German style of quotations. However, if the reader is interested, he and she might find the bibliography useful.

As opposed to mechanism, neovitalism stated that all living phenomena as embryogenesis, the development and growth of organs can be deduced from a trans-biological principle, namely the entelechy, whereas the mechanistic counterpart argued by the machine metaphor. To overcome this time-wasting discussion, holistic approaches claimed that organisms are functioning like systems structured by their own inherent lawfulness. By it these living entities are connected with their internal subsystems and, at the same time, with their external environment. The trick here was that holism was converted from an ontic entity to a methodic tool which could be accepted by scientists working in laboratories.

As a purely metaphysical concept holism is as old as philosophy itself; you can think of Plato, Pascal, Leibniz, Goethe, Hegel, Whitehead among many others as thinkers who proposed holistic approaches to explain the world. Partly it is analogous to the idea or *Weltanschauung* that ancient Greek philosophy subsumed under the concept of ἀμυνεῖα that synthesizes complex components to a whole entity. For example, Plato wrote in the *Sophistes* "to develop is always towards a whole" — this is an ontic approach. Opposed to him, Aristotle mentioned in the *Metaphysika* that the whole is a system of parts structured in a mutual arrangement that come into being by a holistic and indivisible principle; this is a methodological approach. Kant investigated in the *Kritik der Urteilskraft* the epistemic version stating that the cause of the mode of existence for every part of a living body is included in the whole. Furthermore, he defined a functioning organism as a living being that is demarcated due to its own properties against its physico-chemical surroundings. But, simultaneously the organism constructs its own specific environment. For Kant the whole-part relationship represents a bivalent relation the members of which belong to the same level. This statement differs significantly from holistic approaches of theoretical biology that demanded for a hierarchic organization of the system involved. The decisive point of the Kantian view was that the whole emerges as the result of its elements, and a part, on the other hand, is determined by the not-yet developed whole. Kant called this a paradox (antinomy) that still holds as you will see when discussing Bateson's epistemic ecology.

The shortest interpretation of holism is *the whole is more than the sum of its parts*; hence, you have to add the references between the parts to constitute a whole, as Nagel has added. Obviously, it seems to

be trivial that the part is not the whole, it already follows from the definition of part and whole as Leibniz has done it: If the whole is *A*, the part is *B*, I assume, that *A* is bigger than *B*, because a part of *A*, namely *B*, is equivalent to *B* in its whole totality — *quod erat demonstrandum*.

The main characteristics of whole systems are that they exhibit emergent macro-properties that cannot be predicted before they have occurred. Not all their properties can be reduced from the properties of the subsystems, and there exists a holistic feedback, or macro-determination.³ Particularly the latter implication has caused fired discussion for it seemed to be absurd stating that one component which interacts with many, sometimes even with all other components, interacts with the system as a whole simultaneously. For critics it means that the logical principle of *tertium non datur* is faulted. However, holism claimed that real systems are interacting with each other, and no system can be isolated from another under absolute conditions. No doubt, objects are approximately separated — the physicist calls this feature *quasiseparable* —, since otherwise it would be not possible to gain knowledge about them. In addition, holistic systems exhibit a referential deduction top-down, i.e. the network concept. Finally, there exists the postulate of moral value, or the ecological approach. It means that we should comprehend nature and every living being as the indivisible part of a holistic system which should be protected. This hypothesis has its roots in an ecological definition of organisms as subjects actively being related to their environment as Uexküll has argued.

My series of lectures concluded with the paradigm of Gregory Bateson, a well-known son of a famous father, the British geneticist William Bateson. As the development of modern holism started in psychology, the social sciences and linguistic semantics, it makes sense to concentrate in this holistic essay again on Gregory Bateson. The main question addressed in the following will be how Bateson's cognitive ecology fits these holistic principles. Thus, with pen and ink, I now write down my ideas about the anthropologist, philosopher, poet and naturalist, film director, photographer, and profound holistic thinker Gregory Bateson (1904–1980).⁴

³ The philosopher Donald Campbell has defined it as downward causation.

⁴ Here biographical dates will be neglected; for the interested reader I would like to refer to Lipset (1980) and Harries-Jones (1995).

Gregory Bateson's ecological epistemology

It is said by some evolutionary theoreticians that the impact of Bateson on cybernetic epistemology is comparable to the one of Darwin on evolution. As far as I can judge it, this is a true overestimation. Nevertheless, he has compared data, principles, and experiences of anthropology, sociology, linguistics, history, psychology, cybernetics and art, and analyzed their structures and developmental processes as maybe nobody else has done in this way. In the broadest sense of the word, he was an anthropologist studying mankind in all its aspects. That was the reason why Bateson's theory fascinated me, and why it was, on the other side, so difficult to grasp its messages. His strong commitment to an elliptic rhetoric has caused more than once confusion and headaches in my brain. As difficult as the terrain may be that we will enter now, I nonetheless hope the reader will enjoy this holistic approach towards a holistic ecology. Bateson wrote on epistemology, and we will investigate his epistemic ecology from an ontic point of view without bothering on the specialty of psychology, anthropology, or evolution.⁵ To anticipate his systemic approach on epistemology *Mind* here constitutes a component of reality and it is, therefore, encompassed inside nature.

My short treatise aims at clarifying some basic notions like idea, difference, pattern, context, and double-bind. Furthermore, it will discuss the interplay of learning, information and communication. The main objectives are to elaborate Bateson's concept of mind as a feedback system, his learning theory, his communication model that finally resulted in an ecology of mind. Besides the discussion of his holistic epistemology the essay will play with some traits of logical reasoning which have fascinated serious thinkers and clowns as Lewis Carroll and Ludwig Wittgenstein.⁶ My paper relies upon on two books, namely, the *Steps toward an Ecology of Mind* and *Mind and Nature*. The collection of articles tried to formulate an ecology of ideas relating questions like, what for an interaction exists between ideas, which economy restricts the manifoldness of ideas inside a specific area of the brain, what are the necessary conditions for the stabil-

⁵ Bateson described epistemology as follows: "It is the name of a species of scientific study and talk. We set out to study the nature of study itself, the process of acquisition of information and its storage" (Bateson 1979: 6).

⁶ Bateson can be called a distant cousin of these two logicians.

ity or survival of such a system and/or subsystem. The second book calls for the platonic thesis that epistemology is a nondivisible integrated metascience enclosing evolution, thinking, adaptation, embryology and genetics — a science of mind in the broadest sense of the word.

In 1951 he and his Swiss colleague Jürgen Ruesch published their book on *Communication* (Ruesch, Bateson 1951). At that time he also taught physicians and beatniks at the Californian School of Fine Arts in San Francisco — probably a good source for his double-bind, when you will have read the anecdote confirming that double binds really exist:

It happened during the first meeting of the class, and I had talked about the cultural differences between England and the States — an issue, that always should related to when an Englishman is teaching Americans on cultural anthropology. At the end of the meeting one of the participants came to me. He had a look behind his shoulder to be sure that all the others were gone and said very slowly: <I would like to ask one question.>

<Sure, do it.>

<Do you want that we *learn* what you are telling us?>

I hesitated one moment with my answer, and he quickly continued:

<Or is this all a sort of example, an illustration of something?>

<Yes, that's it!>

<But an example for what?>

And nearly one year later I heard some rumour, a sort of complaint. It was said <Bateson knows something which he does not tell us> or <behind the sentences of Bateson, there is something behind all of this, but he never reveals it>. Of course, I did not answer the question <an example for what?>. ⁷

The Batesonian concepts

In his cognitive theory *idea* represents the smallest unit of a mental process, comparable to the bit of our information age. It denotes a difference that distinguishes itself and is situated on the lowest level of perception, and produces patterns. In his later years Bateson referred to Gustav Theodor Fechner who investigated the “just noticeable difference” meaning that perception depends on difference, contrast and

⁷ This happens when taking Bateson seriously and literally — never forget that Gregory is looking from behind the glasses.

ratio, but not on a specific state of matter-mind.⁸ The logician will be probably reminded of Spinoza's dictum *definitio est negatio*. That means, when you define something, you implicitly negate its contraposition. What we call in ordinary language *idea* resembles more a complex aggregate of the units in question. However, even in ordinary language we hesitate to name, for example, the bilateral symmetry of a frog or the message of a single neural impulse as *idea* as Bateson has done it.

To clarify this concept of difference that Bateson preferred to our common word *facts*, Kant's transcendental idealism might help, as so often when the issue converts to a philosophical sophistication. A Kantian difference represents an object or phenomenon that consists of a million of potential facts of which just a few will be realized. The realization depends on the observer and his choice. Due to an idea, the observer and the natural phenomenon are interwoven after the observer had sorted out all the other possibilities that the phenomenon offered to him. You could also call it a recursive operation, it is the logical term Bateson might have preferred.

Closely related to difference, not to say, mere another word is the *pattern* classifying a collection of events or objects that enables us to formulate conjectures. Patterns — a kind of Kantian schemata — refer to the relations between phenomena, things, or events occurring in our environment, and their ability to change the environmental outlook. They are non-material entities that do not emerge as given substances. They are, however, the necessary outward and visible sign of the systems being organized, as Bateson darkly stated. Bateson further explained that the behaviour of animals arises from patterns and forms that are shaped by relations between the animals. The psychologist May described them as the metaphors by which individuals are perceived, and recognized (May 1977: 85f). In an example of frog and fly and how their behavioural pattern are connected, May illustrated the problem of the difference or idea in a very convincing way. A hungry frog sees a fly moving around its head. With the first fly movements the frog takes aim, and the second time when the fly moves the frog gulps it up. Thus, the frog could perceive the fly because the flying animal differed from the frog's environment.

⁸ For a further elaboration of Fechner, Fechner's law on the efferent side of the central nervous system, and for the philosophy of anomal monism, cf. Heidelberger (1993) and Davidson (1980).

The patterns, or Kantian schemata based on our imagination, perception and thinking, are swirling around us and inside us, intertwining the phenomena of the environment with our mental states and building up a referential network that we call "our universe".⁹ For Bateson as for Kant and, in his succession, for Uexküll¹⁰ we humans create our world by applying our schemata, and categorize the world in that way as we see it *behind* our eyes. Schemata are fixed as invariants, or primary categorization for they do not depend on culture or language, education or upbringing, we are born with them. For Bateson they are floating images along interfaces whereby the redundancy of all the possibilities that nature offers us, is limited. Interfaces are stretched out between the nervous system transferring the message of a difference, and the environment. They refer to systems' boundaries defined by an information exchange and by changes in coding, rather than to enclosures like our skin.¹¹

You can compare the Batesonian patterns to Cassirer's thought and perception schemes that fix our floating *Anschaung* (Cassirer 1929: 471). In the third volume of the "Philosophy of Symbolic Forms" Cassirer defined perception as an objectivation that constructs invariants. Hence, the process of cognition, or knowledge fix the permanent flux of the continuum that surrounds us by placing invariants.¹² With those invariants we perceive heterogeneous *gestalten*. If we have designated these *gestalten* and have conceptualized them to ideas, we have built up a reference cluster. Premise is, however, that the heterogeneous forms can be transformed into each other; shortly, they are congruent

⁹ In my lectures series I tried to compare Cassirer's cultural anthropology that relies upon a *Sprachwelt* with Bateson's ecology. For lack of space, I here just quote Cassirer: "All theoretical cognition takes its departure from a world already preformed by language; the scientist, the historian, even the philosopher, lives with his objects only as language presents them to him" (Cassirer 1925: 28).

¹⁰ "In der Gegenwelt sind die Gegenstände der Umwelt durch Schemata vertreten, die je nach dem Organisationsplan des Tieres sehr allgemein gehalten sind und sehr viele Gegenstandsarten zusammenfassen können. ... Die Schemata sind kein Produkt der Umwelt, sondern einzelne, durch den Organisationsplan gegebene Werkzeuge des Gehirnes, die immer bereitliegen, um auf passende Reize der Aussenwelt in Tätigkeit zu treten. ... Die Schemata wechseln mit den Bauplänen der Tiere" (Uexküll 1921: 168–169).

¹¹ "It seems that the interface between nerve and environment is characterized by a deep difference in kind, i.e. in logical typing, between what is on one side of the interface and what is on the other" (Bateson, Bateson 1987: 123).

¹² "Invariants are never any objects, but just specific basic relations and functional interdependencies that we humans fix by the symbolic language of mathematics and physics in equations" (Cassirer 1921: 42; 1929: 471).

to each other. In other words, we humans are capable to convert groups or gestalten because we map perception groups into cluster terms whereby we *observe* structures. That means, we are anchoring the transient *Anschaung* with a grid that we envelope upon our intuitive categories. At that very moment the floating is come to an end, and the real world is trapped into a system of differentiating symbols.

As soon as we have defined an object or event that we are perceiving, we have cut out of nature's collection a phenomenal entity. Due to the cut, or as philosophy says, due to the ontic separation, we can observe what happens on our side of the cut, and we might guess what happens on the other side of the cut — so far Bateson's hope. Premise is that something that is on the other side, has meaning that will diminish the probability of wrong guessing. Crucial is, however, how to position the information *per se* inside the huge lake of redundant messages or differences whilst it does not matter to which side we are referring. Bateson who purposed to eliminate this confusion, identified redundancy and meaning as if both belong to one and the same discursive world. Inside our small universe, being full of meaningful messages, redundancy is part of a meaningful world which encloses the intercourse and the extensional connections as well. But, how should we think of the purpose and/or function of the communicative cognition representing our consciousness?

For Bateson cognition couples ourselves as residents of the environment definitely to the ecosystem at large. Thus, it corresponds to the interrelationship of object to system, or to the whole of nature as Uexküll has pointed out in more poetic words in his *Umweltlehre*. Uexküll's model shows that human monads¹³ whirl around between a specific *Merknetz* and *Wirknetz*, and act in their own closed shells called environment. This environment that is based on the Kantian category of space, is a construct of every living organism configuring their own inner world.¹⁴

¹³ The allusion to Leibniz is conscious. A monad reflects the whole contents of the world because it is a self-identical entity. Therefore, it does not divide itself to a subject-object relation. For a critique of the monadic perspective, cf. Willard van Orman Quine, the mathematical holist.

¹⁴ For a further analysis of Uexküll's notion of environment and how it depends on our tactile and visual perception, cf. Brauckmann (2001) and Kull (1998).

Mind and its learning levels

Based on his experimental data on the communication of dolphins and the learning process of computers, rats, and humans in exact this sequence, Bateson developed a type hierarchy of learning. To anticipate one of Bateson's statements on learning, it reveals a kind of qualitative progression, or, to use his terminology, it is a change of *ideas*. It is closely modelled to Russell's type hierarchy and Goethe's ideal morphology. The name of the latter might be too eccentric to be mentioned in this context. However, Goethe also formulated a typological classification when describing the *Urpflanze* that makes a difference: A stem is what has leaves, a leaf is what has buds, a bud is what has a pistil, a pistil is what has carpels, and a carpel is what has an ovary, style and stigma and so on until you finally imagine the idea representing the *Urpflanze*.

We will start our discussion on Batesonian learning with a few sentences on mind and its meaning when explained from a typological perspective. Without mind, you cannot learn as you have been taught. It is for sure that Bateson would doubt the statement. As the reader might already expect, the mind is somehow inspired by the concept of differences embodying our categorical patterns. Hence, our mind operates like an assembly of mental processes that are caused by differences which conversely are correlated to the transient alterations of negentropy and entropy.¹⁵ This concretely means that mental processes demand for circular, or even more complex chain causation determining the divergent states of our mind. By doing so, they create effective differences that correspond to meaningful information, and code versions of the preceding operations that are already stored in our memory a long time ago. Then the primary differences are converted to transmutations the operation rules of which are relatively constant.

The description and classification of such processes corroborate a hierarchy of logical types being immanent of the phenomena and our mind as well. Unfortunately, Bateson apparently did not consider the difference between ontology and epistemology — or has he seen beyond it? In his ecology, cognitive notions and ontic phenomena that we call thinking, evolution, ecology, life, or learning, are only occurring in systems satisfying those criteria. As our mind is a classifier

¹⁵ To avoid misunderstandings, Bateson here points implicitly to probability and statistics, and not to the thermodynamics of irreversible processes.

of logical types, learning will codify differences to patterns since otherwise it would violate the rationality of the Batesonian theory.

First, Bateson distinguished four different levels of learning that starts on the level zero. Zero-learning can be carried out even by simple mechanical devices as a thermostat. When an individuum receives a signal, for example, a sensory input that is repeated over a certain time, the individuum will show a minimal change in his or her reactions. The zero-level is not stochastic, or to say it from the other side, this learning cannot correct itself by trial and error. After Bateson had worked with dolphins for some years, he extended the concept of zero-learning slightly. Now the relationship between two or more organisms represents the sequence of a stimulus-response series which forces zero-learning to evolve to Learning I. On this learning level we acquire further skills by actively changing a received signal; this is called Learning I, induced, for example, by punishment and reward, or by Pavlovian conditions. It still resembles a kind of mechanical learning that even organisms without a nervous system can carry out. However, even at this primitive state of learning, a frame of reference or context is implicated. Furthermore, it is assumed that a context which can be repeated, symbolizes a pattern-like something informing the organism what for a set of alternatives, whether there are right or wrong, it might opt for. As it might easily be seen, Learning I corrects the results obtained on the zero-position.

When an organism is qualified to modify the knowledge that was acquired on the level of zero-learning and was trained by Learning I, it has arrived at Learning II, or deutero-learning. Then the context as it was perceived will have been changed. In Bateson's cybernetic model, Learning II generates the linear learning of the preceding stages to information sets that enable us to order patterns and to reflect our knowledge. Again, after Bateson had gained more experimental data on the behaviour and learning of dolphins, he revised it. Now deutero-learning prepares us humans to achieve knowledge about the patterns that structure context contingencies which have occurred at Learning I. The revision was necessary for realizing the analogy between a computer as thinking machine and the human brain as operator of differences. Consequently, he insisted that any receipt of information is, in a broad sense, learning. It may sound as if Bateson mapped the calculating machine to imaginative brains, but please beware of it — it is just an analogy, and not an existential proposition as Artificial Intelligence Research has stated it.

This third step of learning will modify the character of the individual because it creates a pattern belonging to one person in that two-person system which constitutes a context of learning. Bateson extrapolated his model further arguing that living organisms are constrained to accumulate deuterio-learning and, therefore, to create hierarchies of knowledge. By it, we are mapping the pattern contexts of the earlier steps of learning processes to our knowledge and try to rationalize the antinomies resulting from the process of deuterio-learning. This leads finally to Learning III, the realm of cognition.

The central point of his epistemic anthropology is the concept of deuterio-learning that refers to a knowledge "every schoolboy knows", namely, you learn for gaining knowledge and habits that distinguish yourself from any other person. As it exists and functions, at least sometimes, mental states as the free will and operational thinking, exist, too. It corresponds to the assumption that there is a set of cognitive habits based on awareness to which mental states will relate without converting themselves at each time to memory. To fully comprehend this statement, one has to recall that for Bateson memory evidences a stream of events, floating around without fixed boundaries such that it is reshuffled again and again, always adjusted to the *here and now*. To say it in other words, you can identify deuterio-learning as the mental state before the knowing of patterns and after trivial learning presupposing a kind of proto-learning. The proto-learning is characterized as the quantitative increase of a simple learning curve which alterates to deuterio-learning by a slow progression. The progression starts from a Pavlovian framework and improves by trial-and-error mechanisms to that stage on which the contexts we have learned, help us to avoid wrong decisions, or to gain wrong information. To be honest, there are some minor problems to believe in it. The most important one is that we humans do not like always to behave like rational animals.

One by-effect of his type hierarchy of learning is that the genetic determinism is pushed aside because we can achieve levels of knowledge that free us from the micro-deterministic constraints imposed upon us by our genetic constitution. The result of a permanent learning process is a kind of evolution. Bateson himself stated that if there exists a fixed scheme of how we think, the evolutionary system will be able to select positive decisions. Such a scheme is either located

inside genes or between them.¹⁶ Bateson's sentences indicate that not all possible choices are placed on the same level; quite the opposite, you will find them distributed on a hierarchy of different stages. That is the main reason why redundancy is emerging, or to say it in Batesonian terms, the predictability of particular events inside a complex system will increase.

Analogous to the levels of learning Bateson deduced three cognitive types that are congruent to specific neurophysiological structures. They are based on the mental curves that classify the learning hierarchies and map the neuronal synapses to the contexts of our mental actions. In other words, in our brain contingent permutations directing and controlling the nervous system are emerging. By a selective process of energetic amplification and elimination, our mental states adjust the constraints of the environment in such a way that they are finally feasible to our logical categories. Conversely, the patterns are regulated by the physical outerworld that surrounds us and every living organisms, animals and plants as well, and that is independent from our interventions or our perceptions.¹⁷ Bizarre as it might sound, for Bateson we humans or animals or plants consist of simple energy transferring system belonging to an integrated eco-cybernetics called *Nature*.

In his theory the progress of science corresponds to the trails of fuzzy thinking structuring itself slowly upon a more or less ungrounded base. Such a base is, part by part, underpinned by rational operations that set interfaces and correct the shadowy fundament. The structure of science that Bateson described as εἶδος, is more likely the same in all different disciplines. This assumption is mainly based on the General System Theory as developed by Bertalanffy stating that we can transfer scientific results from one discipline to another because we are dealing with analogies.¹⁸ For Bateson the analogies, primary relations and secondary relations as well, are produced by information processes of the type hierarchy of learning.

¹⁶ Maybe, you can locate it inside the immune system as Niels Jerne has proposed in comparing his network theory of the immune system to the generative grammar of Chomsky, cf. Brauckmann (1999) for a short discussion how Jerne's network theory of immunology relates to biosemiotics.

¹⁷ The difference between environment and surroundings marks the cornerstone of Uexküll's *Umweltlehre*, cf. Kull (1998).

¹⁸ Cassirer characterized this transfer as the fruitful result of categorical faults.

Communication

Bateson's simplification of Russell's formal type hierarchy is based on his hypothesis that there exist a difference between the context itself and the operation which demarcates the context in question from other patterns. As an example for the relationship of context and message the elephant may serve: Let us imagine the trunk of an elephant. For the elephant it is its nose. The trunk is a *nose* because of a communication process for its context identifies it as a something that is placed right in the middle of two eyes and a mouth. And such a thing, we call a *nose*. In other words, the context determines how an information is coded. In fact, we are talking of a *metacommunication* in the sense of Whorf. The metacommunication serves to classify messages which are embodied in the context. Furthermore, it constitutes and explains the linguistic standards to which message and context refer. And therefore, beware of the message, it is not what it causes. If you do not consider this warning, you might be caught in the trap of double-binds that simulate from a psychiatric perspective the troubles Russell and Whitehead encountered when cleaning up the antinomies of traditional logics. As it is well known, they tried to purify logics from all the disturbances caused because we humans liked to confusing logical types, not to say, we all, sometimes more, sometimes less, celebrate the *homo ludens* in ourselves. It pleases us to categorize objects, phenomena, or events falsely, particularly when doing it on a very high level of abstraction. However, logics was finally [?] thought to be saved for all these paradoxa enjoying philosophical clowns.

Communication, as Bateson understood it, is furnished by some premises that will be shortly described now. The first one is the Freudian postulate that only limited aspects of a part of what happens in human communication are accessible to the consciousness of the participants. Bateson used the image of Rilke's unicorn to sketch the phenomenon of the unspeakable context.¹⁹ When discussing the enigma of communication at the Advanced Institute of Behavioral

¹⁹ "Rilke's Unicorn is present in every conversation between persons and this fictitious beast evolves and changes, dissolves and is recrystallized in new shapes with every move and message. Denial of the Unicorn will not prevent its existence — but only cause it to become monstrous" (Bateson 1971: 20). Although Bateson quotes Rilke's Sonette an Orpheus, Teil 2, Sonett 4, he hides the other Unicorn that was of utmost importance for his theory, namely Carroll's Unicorn appearing *behind the looking-glass*.

Sciences of Stanford in the 1950s, he referred explicitly to Sapir's definition of the unconsciousness as a necessity of the economics of hierarchic organization — a concept which was at the bottom of his own theory of communication.²⁰ The difference to the Freudian approach rest upon the emphasis upon communication and perception. However, Bateson agreed to Freud that all messages — whether verbal or non-verbal — are mediated in their creation by a primary process, i.e., they contain multiple references characterizing our commitment to dream and fantasies.

Another premise was the discontinuity of our experience, a basic statement of Gestalt psychology. It emphasizes the hierarchy of subdivisions typical of the perception process that results in multiple coding. The mentioned multiplicity can effect a code distortion when the persons involved differ in their explicit and implicit rules of coding the phenomena or entities they perceive. Bateson concluded therefore that the rules of self-perception controlling the formation of our self-image, are very often modified by the way in which others apprehend our messages — double-binds are lurking behind the mirror. If other persons cannot transform our messages into information that makes a difference, the communication has failed. When such a failure will be repeated again and again, it will at least affect our behaviour, then our habits and our individual constitution, maybe even until we become cases for pathogenetic investigations.

An important notion of his communication model is the type — it might not surprise anymore. How did Bateson now define types? Types are communication levels that are enmeshed into each other, and at the same time they are used to be built upon hierarchies structuring the communication. As can be easily seen, this double structure and twofold function will cause some additional troubles. Hence, we all know because we were trained to know, there exists a difference between nomina and the referential process, the system and the genesis, the analogous and the digital. To solve it, Bateson tried to knot the digital procedures — that is the traditional denomination — to the analogous procedures. His point of departure was the logical principle that the process of denomination itself can be nominated; to say it simpler, Bateson replaced the ladder of logical types that resulted from

²⁰ "It was Sapir's genius to recognize that culture, language, and personality form an interacting system and that this system in turn interacts with the biological givens of perception to generate cognition" (Rieber 1989: 19). Whether it is a sign of geniality to stating the obvious, I really doubt.

the *Principia*, by attributing an inherent evolution to the context.²¹ However, you cannot say that the epistemic ecology became simpler when adding the time dimension; quite the opposite, it all became more complicated.

According to Bateson communication systems are hierarchically structured, and the verbal description of such an organization rests in most cases upon visual perception converted into linguistic patterns. What did he want to confirm with such a strange statement? His main objective was to refute the reductionistic hypothesis, non-verbal (visual) communication that is based on mythical or religious thinking, would be an evolutionary residuum without any meaning for us, modern and civilized as we ourselves claim to be. Bateson's problem was that he rationalized all what in effect cannot be rationalized, and applied mythical thinking to all what is rational, or to all that appears to be rational. Thus, he really talked *myth*. The crucial problem concerning a philosophical theory of myth in general, is that myths operate by actions. They very often cannot be abstracted to conceptual images which we try to communicate by ordinary language. You inwardly experience and feel a myth, and if you try to put it in proper words, it becomes mere a not yet fully rationalized fiction which is categorized by the belief that its designated sign exists really as an object. Mythical narrative requires a specific way of perceiving, that does not comprehend nature as an objective existence located a world apart. For Bateson, the myth performs a scheme to orient life in general, it interprets our world based on feelings and sensation. Thus, it represents the mother soil for symbolic forms on which, if language and technics are added, science and art can emerge.

In his ecological model, this specific modus of communication fulfils purposes quite different from the verbal language. And it does so since the world of communication contains messages, and it does not consist of well-defined objects which belong to the kingdom of pure mathematics. Concerning the issue, to which scientific discipline Bateson's ecology of communication, or message and difference belong, he himself set it apart of the canon of science and construed it with referring to the anthropological concepts of context and meaning. Therefore, Bateson's ecological epistemology has some similarities to Berkeley's universe of phenomena although even Berkeley himself has underestimated the point, as Bateson conceded. Maybe, a better

²¹ Bateson stated for his own development that he was deeply influenced by his father who did not appreciate Darwinian evolution.

idea would have been “in this context” if Bateson had connected his approach to Uexküll’s ethological aesthetics serving as the visual cue that plays definitely a great part in our understanding of the environment.

Double-bind

A decisive step to his double-bind theory was done when Bateson discovered the conception of the “map-territory” that Alfred Korzybski formulated in a monograph of nearly thousand pages. According to Korzybski reasoning, perception and the communication on perception transform and code the ideas, the perceived objects and phenomenal signs, whereby the report maps the objects in question. By doing so, all methods of coding are subsumed under the iconic *pars pro toto* relationship that couples concepts, objects, and phenomena to each other on quite different ways. As a consequence, the operation to classify all of the communicative material has to be controlled at each state of communication whether it is the map or the territory. Thus, it is evident, or it should be obvious at least, that message and context implicitly refer to the same level constituting and explaining both of them. Should we call this level the *difference*? In one talk on game theory Bateson asked the audience when a sign will be recognized as a signal, and answered it that it will be known because the sign-objects are communicated on a metalevel — and again, we are sitting in tautology’s trap.

If the specific communication levels that are codified as logical units and typify a message, are disturbed by misunderstandings or, even worse, by contractions between speech and action, an additional context will appear that ascribes the typifier in a wrong way to the concerned message. And if further this confusion will become a permanent habit of our person since message and context are falsely related to each other again and again, strong psychoses can infect you and maybe change your individuality. In 1961 Bateson edited and introduced the notebook of a schizophrenic, *Perceval’s Narrative* which shows how the world of a schizophrenic is structured completely by double-binds. In the schizophrenic’s world the apparent coherence of logics that our mind can process, is broken up. To explain this sharp

argument, you have to think about Bateson's attitude towards the syntactical first person, the *Ich*.²²

Like Schopenhauer, Bateson denied an objective existence of the *Ich* since it is present in the world of communication alone. By it, he avoided the solipsism of philosophical phenomenology as formulated by Husserl.²³ For Bateson's ecological approach the *Ich* is an essential member of the syntax that covers its own experience and the life of its fellow *Ichs* on which its well-being depends. To put it into other words, between context — whether it is a speech or an action — and messages, or between meta-message and message there exists the same gap that you can discover between an object and the word assigned to it. That means simply you need a bridge to cross the river of difference that floats between both. And even worse, *per definitionem* both belong to different hierarchical levels. Thus, you are forced to climb, too. Seriously, as we all live our lives as a *zoon politikon*, we desperately need conceptual and commonly accepted notions to describe the perception states of other persons if we want to experience these states with our own body.²⁴

Due to his double-bind concept Bateson focused even more than he had done before on the human observer whom he set right into the centre of the observation process. Such a focus presupposes that the entity to be investigated represents an infinite regress of references that will never transform to the object itself — a statement corresponding to his attitude towards the *Ich*.²⁵ The nucleus of the double-bind theory stated that beyond every single message is hidden a context which conditions the message and effects our actions. The double-binds that support trans-contextual syndroms, function like the bridge offering us a pathway over the tissue, woven of contexts and

²² Here the German idiom *Ich* for the English *I* is consciously chosen because the plural of the English *I* reminds of German eggs — no doubts, they are objects, but not the subject addressed here.

²³ For the scientific attitude cf. Schrödinger's attitude: "Pour être bref, je designerai l'hypothese qui s'oppose au solipsisme par lettre *P* (personnalité des creatures qui m'entourent)" (Schrödinger 1935: 186).

²⁴ "Eine recht radikale Folgerung daraus ist, dass das Innere (Psychische, Mentale), also das eigentlich privat, intern Zugängliche nur mittels der äusseren Sprache und ihrer sozial bestimmten Bedeutungszuordnungen dargestellt (repräsentiert), differenziert, gemeint und begriffen werden kann. Das klingt geradezu paradox" (Lenk 1994: 38).

²⁵ "In communication exchange, there could be no quantities or substances, however, only transformations of patterns. [...] I acquire in my mind no double bind but only a percept or transform of a double bind" (Bateson 1972: 272).

messages. Obviously, his double-bind theory is based on the model of deuterio-learning emerging from the crucial problem of *Verdinglichung* [objectivation].

Ecology of mind

Now context and message are even more interwoven than ever before. As already said, the mind consists of transformations, phenomena, events and the rules which transform the former. To recapitulate shortly, Bateson defined the mind from a systemic standpoint and, at the same time, from a genetic perspective. According to evolutionary theory, all biological systems are capable of an adaptive modification initiated by a feedback that results from the transient operations of trial and error. To say it in more biological terms, they obey the Tibetan pray mill murmuring selection-adaptation-mutation. Those actions, conversely, create a superimposition that connect the numerous feedback loops mutually. Thereby mental habits are shaped which qualify us to problem solving. And here we are —standing again on the level of deuterio-learning.

Ecology here — it seems to be meaningless to say anymore *in this context* — is characterized as a classification modus, i.e., an operation that is executed by the whole system consisting of an individual, a computer and the environment. And exactly this encompasses *ecology of mind*. For example, a specific information set is transferred by the mind, this is what Bateson called the screening of the consciousness to curves of mental moments. One idea after the other is systematically selected by an unconscious process of perception that is performed by our mind. A formal feature of this mental operating is the aiming towards a steady state that couples body, mind and ecosystem in harmony. During this process the system is learning. That means, in mutually crossed loops phase alterations are effected by the environment and then distributed very slowly through the whole ecosystem. Bateson has described it as the behaviour of vicious systems escalating over their circuits; maybe an overshoot will be the best image to describing it. To sum up shortly, the minimal demands for an ecological system of mind that should be fulfilled are the following conditions:

1. The system consisting of our mental states and the external environment works on the basis of differences;

2. the system consists of closed, but dynamic networks resulting from differences and transformations of differences;
3. many events inside the system are fed more likely by a reacting component than by the influence of the triggering component with energy;
4. there exists self-regulation, or self-correctiveness, as Bateson emphasized, towards homeostasis.

Conclusion

Bateson's wanted to discover the patterns that connect the physical world of *pleroma*²⁶, and of *creatura*. In the universe of the former, the forces and effects explain sufficiently events, but inside the creative universe you cannot apprehend without considering the semantic differences imposed upon us by the environment. To transfer these different worlds to Bateson's ecological theory, he talked in the terms of *pleroma* in addressing mythical *creatura*. Unfortunately, he was too occupied with the formal origins of order which he understood as a problem of recursive-like operations. The ecology of mind represents an epistemology based on anthropological and ethological field studies and, at the same time, on cybernetic research. His contextual epistemology symbolizes an eco-systemic perspective of living processes that envelopes the individual mind, the pathways and messages outside the body, the interconnected environment and the planetary system. He held an epistemological holism that is exaggerated by a cybernetic terminology — and that is the elegance of his theory as its pitfalls, too.

Therefore, I should confess that I am more than dubious about imposing a formal logical style hierarchy of logical types on the human style of thinking. For me, we are not nearly as rational as Bateson suggests. His epistemic ecology is, however, sympathetic for me, because he burnt his fingers by putting them to many rusty conceptual approaches, mental habits, ways of perceiving and relational patterns. In the *gestalt* of a leaf, in the body of a cancer, in the grammar of our language he discovered comparable messages that patterns our world. If you translate Bateson's pattern into existential terms, then you will see the myth as the structure that patterns human events. A few centu-

²⁶ *Pleroma* openly refers to Jung's ideas, but Bateson understood this mystical notion in a pre-Jungian sense.

ries ago it would have been called pantheism. No doubt, helpful here was his immense scientific imagination and his maxim of reasoning to think strictly and loosely simultaneously.

How does it all fit together? To answer with Batesonian words, it is the *idea* that the contrast between part and whole as soon as such a contrast appears in communication is just one of the logical types, but never one of reality. The whole is always related to its parts on a metalevel — my addendum here is, on the metalevel of a communication model of cognition. Are there any questions left? I really hope so, except the initial question asked at the beginning, namely, how Bateson's cognitive ecology fits the holistic principles of emergent macro-properties, the holistic feedback, an approximate separation, the non-predictiveness, and the moral value. This question was implicitly answered again and again on the preceding pages.

References

- Bateson, Gregory 1936. *Naven: A Survey of the Problems Suggested by a Composite Picture of the Culture of a New Guinea Tribe Drawn from Three Points of View*. Cambridge: Cambridge University Press.
- 1961. *Perceval's Narrative: A Patient's Account of his Psychosis, 1830–1832*. Reprint edited and introduced by G. Bateson. Palo Alto: Stanford University Press.
- 1971. Communication. In: McQuown, Norman A. (ed.). *The Natural History of an Interview*. Chicago: University of Chicago Library Microfilm Collection of Manuscripts on Cultural Anthropology [no. 95, series IV], 1–40.
- 1972/2000. *Steps to an Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution, and Epistemology*. San Francisco: Chandler Publishing Company.
- 1979a. *Mind and Nature: A Necessary Unity*. New York: Dutton.
- 1979b. The Science of Knowing. *Esalen Catalog* 17(2): 6–7.
- Bateson, Gregory and Bateson, Mary Catherine 1987. *Angels Fear: Towards an Epistemology of the Sacred*. New York: Macmillan.
- Bateson, Gregory and Mead, Margaret 1942. *Balinese Character: A Photographic Analysis*. (Special publication of the New York Academy of Science, vol. 2.) New York: New York Academy of Sciences.
- Brauckmann, Sabine 1999. On genes, cells and memory. *Semiotica* 127(1/4): 151–167.
- 2001. From the haptic-optic space to our environment: Jakob von Uexküll and Richard Woltereck. *Semiotica* (Special issue: Jakob von Uexküll: A Paradigm for Biology and Semiotics, in print).

- Cassirer, Ernst 1921/1994. Zur Einsteinschen Relativitätstheorie. In: Cassirer, Ernst. *Zur modernen Physik*. 7. unveränd. Auflage. Darmstadt: Wissenschaftliche Buchgesellschaft, 3–124.
- 1929/1996. *The Philosophy of Symbolic Forms. Vol. 3: The Phenomenology of Knowledge*. (Translated by Ralph Manheim, pref. and introd. by Charles W. Hendel.) New Haven: Yale University Press.
- 1925/1953. *Language and Myth*. (Translated by Suzanne K. Langer.) New York: Dover.
- 1979. *Symbol, Myth and Culture: Essays and Lectures of Ernst Cassirer, 1935–1945*. Verene, Donald Phillip (ed.). New Haven: Yale University Press.
- Carroll, Lewis 1899. *Through the Looking-Glass and what Alice Found There*. London: MacMillan.
- Davidson, Donald 1980. Mental events. In: Davidson, Donald. *Essays on Actions and Events*. Oxford: Clarendon Press, 207–222.
- Fechner, Gustav Theodor 1873. *Einige Ideen zur Schöpfungs- und Entwicklungsgeschichte der Organismen*. Leipzig: Breitkopf u. Härtel.
- Frede, Dorothea and Schumacher, Reinhold (eds.) 1997. *Ernst Cassirers Werk und Wirkung*. Darmstadt: Wissenschaftliche Buchgesellschaft.
- Harries-Jones, Peter 1995. *A Recursive Vision: Ecological Understanding and Gregory Bateson*. Toronto: University of Toronto.
- Heidelberger, Michael 1993. *Die innere Seite der Natur. Gustav Theodor Fechners wissenschaftlich-philosophische Weltauffassung*. Frankfurt: Klostermann.
- Jerne, Niels 1985. The generative grammar of the immune system, *Bioscience Reports* 5: 439–451.
- Kant, Immanuel 1790/1975. Kritik der Urteilskraft. In: Kant, Immanuel. *Werke*, vol. 5. Weischedel, W. (ed.). Darmstadt: Wissenschaftliche Buchgesellschaft, 237–620.
- Korzybsky, Tadeusz 1941. *Science and Sanity*. New York: Science Press.
- Krois, John M. 1981. Peirce and Cassirer: the philosophical importance of a theory of signs. In: Ketner, Kenneth L.; Ransdell, Joseph M.; Eisele, Carolyn; Fisch, Max H. and Hardwick, Charles S. (eds.), *Proceedings of the Charles S. Peirce Bicentennial International Congress*. Lubbock: Tech University Press, 99–104.
- Kull, Kalevi 1998. On semiosis, Umwelt, and semiosphere. *Semiotica* 120(3/4): 299–310.
- Lenk, Hans 1994. *Von Deutungen zu Wertungen: Eine Einführung in aktuelles Philosophieren*. Frankfurt: Suhrkamp.
- Lipset, David 1980. *Gregory Bateson: The Legacy of a Scientist*. Englewood Cliffs: Prentice Hall.
- May, Rollo 1977. Gregory Bateson and humanistic psychology. In: Brockman, John (ed.), *About Bateson*. (Essays on Gregory Bateson by Mary C. Bateson, Ray Birdwhistell, John Brockman, David Lipset, Rollo May,

- Margaret Mead, Edwin Schlossberg, with an afterword by Gregory Bateson.) New York: Dutton Paperback, 75–99.
- Quine, Willard van Orman 1987. *Quiddities: An Intermittently Philosophical Dictionary*. London: Penguin.
- Rieber, Robert W. 1989. *The Individual, Communication, and Society: Essays in Memory of Gregory Bateson*. Cambridge: Cambridge University Press.
- Ruesch, Jürgen and Bateson, Gregory 1951. *Communication: The Social Matrix of Psychiatry*. New York: W. W. Norton.
- Sapir, Edward 1927/1949. *Selected Writings of Edward Sapir*. Mandelbaum, D. G. (ed.). Berkeley: University of California Press.
- Schrödinger, Erwin 1935. Quelques remarques au sujet des bases de la connaissance scientifique. *Scientia*, 57: 181–191.
- Uexküll, Jakob von 1921. *Umwelt und Innenwelt der Tiere*. 2. Auflage. Berlin: Springer.
- 1940. *Bedeutungslehre* (BIOS. Abhandlungen zur theoretischen Biologie und ihrer Geschichte, sowie zur Philosophie der organischen Naturwissenschaften, Bd. 10.) Leipzig: J. A. Barth.
- Whorf, Benjamin Lee 1952. *Collected Papers on Metalinguistics*. Washington: Foreign Service Institute.

Шаги к экологии познания: холистическое эссе

Эссе информирует о холистическом подходе Грегори Бейтсона к эпистемическому рассмотрению природы. Экология разума опирается на биологический холизм, служащий методическим средством объяснения “феноменов” жизни, таких как, например, коммуникация, обучение, познание. Начав с *идеи*, мельчайшей единицы информации, Бейтсон разработал классификацию обучения, основанную на кибернетическом подходе к разуму. Коммуникационная модель сосредоточена на парадоксах, обусловленных ложной сигнификацией. Она ведет к патогенезу шизофрении, определяемой в рамках концепции *двойных посланий*. Эта экосистемная перспектива по отношению к живым процессам представляет истинно холистическую теорию природы.

Teadvustuse ökoloogia poole: holistlik essee

Essee annab ülevaate Gregory Bateson'i holistlikust lähenemisest epistemilisele loodusvaatele. Mõistuse ökoloogia tugineb bioloogilisele holismile, mis on elu "fenomenide", — nagu näiteks kommunikatsioon, õppimine, tunnetus, — seletamise meetodiliseks vahendiks. Alustades *ideest*, vähimast informatsiooniühikust, töötas Bateson välja teadvusele küberneetilisel lähenemisel põhineva õppimise klassifikatsiooni. Kommunikatsioonimudel keskendub väärtahistamise poolt põhjustatud paradoksile. See viib skisofreenia patogeneesini, mida määratletakse *topeltseoste* kontseptsiooni raames. Taoline ökosüsteemne elusprotsesside käsitlus esindab tõeliselt holistlikku(terviklikku) loodusteooriat.

Discovering ecosemiotics

Winfried Nöth, Kalevi Kull¹

Ecosemiotics (or ecological semiotics) is the study of sign processes in the interaction of humans with their natural environment. This semiotic field at the crossroads of nature and culture is closely related to its neighbouring fields of biosemiotics and semiotics of culture, but semiosis in the relation between humans and nature is also of concern to aesthetics, the visual arts, literature, hermeneutics, and theology. Aspects related to ecosemiotics have also been studied in human ecology, cultural geography, ecopsychology, and ecolinguistics.

There are two different conceptions of the ecological aspects of semiotics:

(1) *Ecological* refers to all environmental information except for the one communicated by humans or in the case of other organisms by conspecifics. In this sense, there is ecological semiosis in all organisms, and ecosemiotics comprises a large part of biosemiotics.

(2) In a narrower sense *ecological* refers to the environment of humans only. Accordingly, human environmental problems, when treated semiotically, belong to the field of ecosemiotics. In this sense, ecosemiotics is a part of anthroposemiotics, and more strictly, of the semiotics of culture. Four major models of the relationship between humans and their environment can be discerned in the history of culture: the pansemiotic, the magical, the mythological, and the one of the natural sciences (see also Nöth 1998; 2000: 251–252).

Due to these two different meanings of 'ecological', there have been different definitions of 'ecosemiotics'. For instance, Tembrock (1997) follows the first, whereas Kull (1998) follows the second definition.

First outlines of ecosemiotics and semiotic ecology can be found in the special issue of *Zeitschrift für Semiotik* 18(1) entitled 'Natur, Umwelt, Zeichen' (1996) or in the papers by Nöth and Kull in *Sign Systems Studies* 26

¹ Authors' addresses: W. Nöth — Anglistik/Romanistik, University of Kassel, Georg-Förster-Str. 3, D-34109 Kassel, Germany; e-mail: noeth@uni-kassel.de; K. Kull — Department of Semiotics, University of Tartu, Tiigi St. 78, 50410 Tartu, Estonia; e-mail: kalevi@zbi.ee.

(1998). Other special issues of journals dedicated to the topic are *American Journal of Semiotics* 11(1/2), entitled 'Refiguring Debris' (1994), *Zeitschrift für Semiotik* 19(1/2), entitled 'Zur kultursemiotischen Funktion von Gärten und Parks' (1997), and *Sign Systems Studies* 28 (2000), with two articles on the topic. As a university course, ecosemiotics has been included into the curriculum of Tartu University (since 1998) and of the Estonian Agricultural University (since 1999). As an applied field, ecosemiotics may have a growing importance for landscape planning and for environmental studies in general (see, e.g., Böhme 1997, Cantrill and Oravec 1996, Larsen and Grgas 1994, Posner 1990, Schempp *et al.* 1997, Simmons 1993, Wrede and Adams 1994).

A workshop on *Ecosemiotics: Studies in Environmental Semiosis* has been held in the framework of the Nordic-Baltic Summer Institute for Semiotic and Structural Studies at Imatra, Finland, on June 16–17, 2000. Considering the potential importance of this new field of semiotics and its potential for bridging the cultural and scientific aspects of ecology, it seems worthwhile to point out few details of this event as one of the first meetings in the field.

The contributions to the workshop were subdivided in three parts:

Theoretical Foundations:

Winfried Nöth (Germany) — Introduction to ecosemiotics: studies in environmental semiosis;

Kalevi Kull (Estonia) — Inter-species relations in change: an ecosemiotic analysis;

Søren Brier (Denmark) — Cybersemiotics, biosemiotics and ecosemiotics;

Solomon Marcus (Romania) — The semiotics of ecology in a mathematical perspective;

Andreas Weber (Germany) — Turning the inside out: natural forms as expression of intentionality.

Cultural Ecosemiotics:

Osmo Kuusi (Finland) — Ecosemiotics of materials;

Christina Ljungberg (Switzerland) — (Mis)reading the signs: problems of interaction in contemporary Canadian fiction;

Hannele Kerosuo (Finland) — Border zones as places of change;

Peter Schulz (Switzerland) — Subjectivity in an semiotic perspective;

Alexander E. Sedov (Russia) — New Russian myths concerning genetic research in the mass-media and in the common mind;

Dario Martinelli (Italy) — To beast or not to beast? That is the question;

Tuomo Jämsä (Finland) — Ecology of the human nature.

Verbal and Nonverbal Ecosemiotics:

Zdzisław Wąsik and Elżbieta Wąsik (Poland) — On the ecological properties of languages: searching for a descriptive model in the domain of external linguistics (on the basis of Aroumunian and Frisian);

- Isabelle Guaitella (France) — Rôle du geste et de la voix pour l'expression des attitudes dans l'interaction;
- Serge Santi (France) — Fondations sensori-motrices des relations voix/gestes dans la communication;
- Albert Di Cristo (France) — Une grammaire écologique comme cadre interprétatif de la prosodie de la parole;
- Riste Kesksaik (Estonia) — Semiotics of garbage in Estonian press;
- Magnus S. Magnusson (Iceland) — Genes and the music of human interactions.

The abstracts of the papers were published as a booklet (*Abstracts — Nordic-Baltic Summer Institute for Semiotic and Structural Studies*. Imatra, 2000) for the participants. The session included a general discussion about the relationships between ecosemiotics, biosemiotics, and semiotics of culture. Despite some overlap between these fields, there remains much to be explored.

An important challenge for ecosemiotics will be a systematic analysis of models of semiotic relationships between humans and their environment, both in historical and in contemporary cultures (cf. Böhme 1996, Bouissac 1989, Hornborg 1996, Krampen 1989, Nöth 1998, Oelschlaeger 1991, Rapp 1981, Warnke 1998). This work has only begun.

References

- Böhme, Gernot 1997. Aesthetic knowledge of nature. *Issues in Contemporary Culture and Aesthetics* 5: 37–45.
- Böhme, Hartmut 1996. Über vormoderne Naturkonzepte. *Zeitschrift für Semiotik* 18(1): 19–22.
- Bouissac, Paul 1989. What is human? Ecological semiotics and the new animism. *Semiotica* 77: 497–516.
- Cantrill, James G. and Oravec, Christine L. (eds.) 1996. *The Symbolic Earth: Discourse and our Creation of the Environment*. Lexington: The University Press of Kentucky.
- Hornborg, Alf 1996. Ecology as semiotics: Outlines of a contextualist paradigm for human ecology. In: Descola, Philippe and Pálsson, Gisli (eds.), *Nature and Society: Anthropological Perspectives*. London: Routledge, 45–62.
- Krampen, Martin 1989. An ecological approach to semiotics. In: Koch, Walter A. (ed.), *Evolution of Culture*. Bochum: Universitätsverlag Dr. Norbert Brockmeyer, 117–133.
- Kull, Kalevi 1998. Semiotic ecology: Different natures in the semiosphere. *Sign Systems Studies* 26: 344–371.
- Larsen, Svend Erik and Grgas, Stipe (eds.) 1994. *The Construction of Nature: A Discursive Strategy in Modern European Thought*. Odense: Odense University Press.
- Nöth, Winfried 1998. Ecosemiotics. *Sign Systems Studies* 26: 332–343.
- 2000. *Handbuch der Semiotik*. Stuttgart: J. B. Metzler.

- Oelschlaeger, Max 1991. *The Idea of Wilderness: From Prehistory to the Age of Ecology*. New Haven: Yale University Press.
- Posner, Roland (ed.) 1990. *Warnungen an die ferne Zukunft: Atommüll als Kommunikationsproblem*. München: Raben.
- Rapp, F. (ed.) 1981. *Naturverständnis und Naturbeherrschung*. München: Fink.
- Schempp, Dieter; Frantz, Jürgen; Krampen, Martin and Weißinger, Sabine (eds.) 1997. *Mensch, Raum und Pflanze*. Braunschweig: Thalacker Verlag.
- Simmons, I. G. 1993. *Interpreting Nature: Cultural Constructions of the Environment*. London: Routledge.
- Tembrock, Günter 1997. Ökosemiose. In: Posner, Roland; Robering, Klaus and Sebeok, Thomas A. (eds.), *Semiotik: Ein Handbuch zu den zeichentheoretischen Grundlagen von Natur und Kultur*, vol. 1. Berlin: de Gruyter, 571–591.
- Warnke, Camilla 1998. Schellings Idee und Theorie des Organismus und der Paradigmawechsel der Biologie um die Wende zum 19. Jahrhundert. *Jahrbuch für Geschichte und Theorie der Biologie* 5: 187–234
- Wrede, Stuart and Adams, William Howard (eds.) 1994. *Denatured Visions: Landscape and Culture in the Twentieth Century*. New York: The Museum of Modern Art.

Finno-Ugric semiotics: Cultures and metacultures

Anti Randviir, Eero Tarasti, Vilmos Voigt¹

In the framework of the Finno-Ugric Congress held in Tartu in 2000 there took place, under the Hungarian initiative, also foundation of the Finno-Ugric Semiotic Association to unite different Finno-Ugric peoples and cultures, from the semiotic viewpoint, in at least two major aspects. The first aspect is concerned with unified semiotic analysis of these cultures, whereas the second one should be concerned with organizational matters in terms of forming stable network between the Finno-Ugric semioticians and the relevant national institutions. Since this type of organization (cf. organizations founded on the basis of so-to-speak universal objects, e.g. visual semiotics, spatial semiotics, etc.) is not common yet in the international structure of semiotics (probably with some exceptions like the Balkan region), it is probably worth introducing both from the formal viewpoint and with respect to a closer look at the semiotic activity in the three Finno-Ugric cultures having the state structure to support it (Estonia, Finland and Hungary). Within the domain of Finno-Ugric studies, semiotics appeared only during the last decades as a special field of research. Important works were published in linguistics, literary studies, musicology, art history, cultural analysis, psychology, folklore and sociology etc. from semiotic points of view. Detection of signs in different Finno-Ugric cultures became a fashionable topic. International acceptance of Finnish, Hungarian and Estonian semiotics has been overwhelming. Still, we know relatively little about semiotics among other Finno-Ugric peoples. Historic surveys are relatively frequent, but until recently there was no attempt to summarize the scope and prospects of 'Finno-Ugric semiotics'. About thirty years ago Thomas A. Sebeok, in a lecture for the audience of the

¹ Authors' addresses: A. Randviir — Dept. of Semiotics, University of Tartu, Tiigi St. 78, 50410 Tartu, Estonia; e-mail: randviir@ut.ee; E. Tarasti — Dept. of Musicology, University of Helsinki, Vironkatu 1, 00014 Helsinki, Finland; e-mail: tarasti@helsinki.fi; V. Voigt — Dept. of Folklore, Eötvös Loránd University, Piarista köz 1, 1052 Budapest V, Hungary; e-mail: voigt@ludens.elte.hu.

Helsinki University, spoke about the necessity of collecting data of non-verbal behavior among the Finno-Ugric peoples, including their sign systems. However, this lecture remained unpublished and thus without direct results. Thus, in accord with the trivial dynamism between the development of science and its formal structures (university departments, associations, etc.), foundation of Finno-Ugric Semiotics Association presents a good ground to ask the question why there would be any need for Finno-Ugric semiotic studies at all.

It is a well-known fact that semiotics is as old a discipline as having its roots in Ancient Hellas, having been belonging, as a (sub)doctrine of diagnostics, to the scientific field of medicine. It is also a widespread triviality that the word 'semiotics', as having its roots in ancient terminology, in fact did survive much thanks to this quite specific area of usage. Yet again, from the contemporary semiotic viewpoint it is not customary to acknowledge survey of semiotics as such a dependent field. Instead it is more usual to rather divide the history of semiotics into roughly two periods, one of which helps semioticians to refer their history back until Antiquity, and the other one considering the end of the 19th century as the 'true semiotics in the meaning understood in contemporary context'. This understanding, as we know, has also dissimilar points of departure: some claim contemporary semiotics to have begun with the works of F. de Saussure, others associate it with creation by C. S. Peirce. A silent background knowledge of both trends, however, acknowledges the fact that neither of the individuals can be associated with conscious positive propaganda for the birth of contemporary semiotics, for one of them was articulated practically only via his students, and the other one, in connection with quite specific biographical-historical circumstances, could not express his views unless pleasing the *goal keepers* of the time.

Thus at the first glance we could differentiate between two births of semiotics: one at its historical literary beginning in ancient Hellas, and the other one as having taken place in the end of the 19th or in the beginning of the 20th century. Hereby it is maybe even not that relevant what was the respective argument for the grounds of such a discipline — whether the similarity of different *sign systems* (Saussure) or the overall logic of human behavior (Peirce). Hurrying on ahead — the general development, or more correctly introduction of the conceptions, of 'semiotics proper' has comparative aspects for semiotic discourse in the Finno-Ugric cultures, and on the other hand it is possible to outline connections of the Finno-Ugric people(s) with the development of semiotics as a discipline (e.g. merits of the Hungarian T.A. Sebeok and others for the expansion of Peircian semiotics, and cultural semiotics as a branch of Saussure's semiology). However, if we want to give a short sketch on Finno-Ugric semiotics, the topics should include at least the following: Finno-Ugric background of native semiotic terms; semantic development and recent status of terms denoting the 'scientific study of signs' in the Finno-Ugric perspective; native-cultural semiotic discourse; recent 'schools',

'trends' and 'circles' in Finno-Ugric semiotics and their research history; and finally of course also future tasks and perspectives.

If we leave for a moment the metalevel of description, we immediately recognize that at the same time the above mentioned two major contemporary semiotic theories were molded, there were shaped also those semiotic concepts that were quite directly connected with the general movement of formation of nation states in Europe; and the latter were most definitely semiotic. It does not even seem important whether the national movements leading finally to contemporary order of Europe (and that much of the world in general) were national in the today's recognized meaning, but they definitely took many semiotic structures as those through which to differentiate between dissimilar cultures. Suchlike semiotic structures often included language, way of life, behavioral patterns, image-schemas, and the similar — and it is noteworthy that this has been alike also on the metalevel (e.g. C. Kluckhohn's outstanding treatment [that was actually roughly simultaneous with trials of defining culture by O. Looorits, an Estonian cultural philosopher, to be taken up below]). During the radical development of the foundations of contemporary semiotics as a discipline, the general cultural development of several nations was essentially reflective and semiotic as well.

Traces of the semiotic vocabulary and the Hungarian as the oldest

Let us first consider the Finno-Ugric background of the respective native semiotic terms. Hungarian *jel/jegy*, the basic term in semiotics, occurs in historical manuscripts from 1416/1224 on. Its meaning is 'sign', and medieval sources contain verbs or derivatives from it (together with scholarly references). In a Dominican codex, *Sermones Dominicales* (1456–1470), a Latin glossa explicitly says: "Et hoc vobis i.e. signatum vel pro signo Jel signum", where the correct and erudite Latin terms deserve the most attention. It is well known a fact that in *Magyar Encyclopaedia...* by János Apáczai Csere (1653) we could trace a highly developed classification and terminology of signs in Hungarian. The most striking feature is that the words used in Hungarian for semiosis are not from the common European (Graeco-Latin) vocabulary, but refer to an older strata in the language. Hungarian (TESZ II: 270) and Finno-Ugric etymological dictionaries (UEW I: 2, 91) agree that the Hungarian *jel/jegy* can be derived from the Finno-Ugric *jälke* (footprint), belonging thus to the vocabulary of the ancient culture of hunters (see Voigt 1990).

In the major Finno-Ugric languages we do not find such old words, used today as semiotic terms: the Finnish *merkki* or the Estonian *märk* (and *märgisüsteem* further on) are recently coined forms with non-Finno-Ugric background. In other Finno-Ugric languages the similar terms are quite new too. A similar situation can be observed also at the semantic development and recent status of terms denoting the 'scientific study of signs' in the Finno-Ugric per-

spective. Following the development and terminology of international semiotics, the Estonian *semiootika* has been invented recently, as a term from the 1960s, originated from the Russian terminology of the same time. Somewhat later the Finnish *semiotiikka* appeared, following the main international semiotic trends and terms. This term is from the Anglo-German-Russian tradition (not from the French one), and, despite the very close contacts of Finnish semioticians with the French schools, does not represent (with some exceptions) *sémiologie*. Slightly earlier the Hungarian *szemiotika* was used as a scholarly term. It came directly from Russian (better to say from the early works of the Moscow–Tartu School), but within an international frame of reference, and with some regard to older usage. The Hungarian equivalent (*jeltudomány*) is understandable, but it does not exist in everyday use. The Hungarian term finally belongs to the American (Peircian) tradition, but with Russian intermediary reasoning.

In other Finno-Ugric languages we could not find such a special term for semiotics or for the study of signs in general usage that would not be a direct translation from Russian.

One could repeat the fact that in the Finno-Ugric languages thus terms to designate ‘the science of signs’ are related to *semiotic(s)*, rather than *sémiologie* (which is of course curious, if taking into account the specific scientific developments both on the paradigmatic scale and the connections on personal level between the scholars). It is an important task to describe the semantic development of the terms for ‘semiotics’ in all Finno-Ugric languages with a special emphasis on their origin and differences. Unfortunately, there have not been such summarizing attempts; so this is definitely an important task for the future.

As for contemporary humanitarian studies, then in Hungary only some years later than the Tartu–Moscow School was established in Estonia, by about 1968, structural studies in linguistics and literature, search for models in folklore, mass communication or cultural phenomena were grouped together into a special circle which was then marked by terminology of semiotics. Informal (but not persecuted) groups, projects, conferences and publications grouped on similarly. Since then semiotics in Hungary has been alive, and has gained a positive international response (see Voigt 1977). On the other hand there is no ‘Hungarian School’ of semiotics; however there have been established stabile connections with Hungarian semioticians who have been working in Yugoslavia, Romania, Czechoslovakia, United States, France, Italy, etc.

While the present article can treat the development of semiotics in Estonia, Finland and Hungary, it can not be as successful when trying to describe other Finno-Ugric cultures in which we do not know of any particular semiotic school or trend — at least by now and according to our information. However, in Debrecen (1990) and Jyväskylä (1995) international Finno-Ugric congresses Komi ethnographers and mythologists declined to semiotics. As N. Konakov has written at the 1992 Imatra International Summer Institute

meeting, Komi (Zyrian) semiotics considers the works by A. Sidorov (from 1924 on), L. Gribova (from 1968 on), V. Semenov, N. Chesnokova and D. Nesanelis as its predecessors. In September 1991, the third all-republican meeting ("Death as a Phenomenon of Culture — Komi Seminar of Culture") was held in Syktyvkar. At the 11th Annual Meeting of the Semiotic Society of Finland (Imatra, July 13–19, 1992) a session "Semiotics of Nature and Culture of the Komi (Zyrians)" was organized by J. Seppänen and N. Konakov. In the frame of that event Konakov declared their connection with the Tartu School. However, in the papers presented, the terminology of semiotics occurs very rarely, not giving thus the possibility for the reviewers to make the relevant Finno-Ugric comments (among the few articles by the Finno-Ugric authors representing semiotic viewpoint and simultaneously nations incorporated to the Russian, formerly the Soviet, cultural space, see Konakov 1993; Limerov 1993; Uljashov 1993; Shaparov 1993).

At least today it remains a secret, whether in the lost manuscript by G. Kuzebaj (1898–1937) from 1922–1925 on the Udmurt ornaments we could have found another (Udmurt) forerunner of Finno-Ugric ethnosemiotics.

Finno-Ugric semiotics and its influence on the semiotic paradigm

What about the Finno-Ugrians as a group of little nations to have their influence on the development of global semiotics? A simple and common sense answer would be: peripheral. However, this is also the key to analyzing any development of scientific paradigms in Kuhn's sense. In the development of semiotics, several Finno-Ugrians (as we first are to talk restrictedly about individuals in the philosophical terms of scholarly development) have been in the role of influencing the alternation of the paradigm as defined by the essence of the nucleus of the paradigm. The Hungarian T. A. Sebeok has undoubtedly served semiotics in its expansion to the object areas considered as nonexistent or peripheral in the mainstream of semiotics (see Sebeok's output 1942–1995; Deely 1995). The open contemporary (having of course the fundamental works by J. v. Uexküll from the beg. of the turn of the century in mind) inclusion of biological (and, in fact, biospheric in Vernadski's sense) phenomena into the scope of semiotics has demanded also review of the general metalanguage and terminological foundations of the nuclear elements of the paradigm as a whole. This development seems to be a classic example of the evolution of a scholarly discipline.

In connection with the biological aspects to be dealt by semiotics, but besides such an overall influential cooperation to semiotics, there can be brought forward also other kinds of examples concerning the dynamism between the center and the periphery of objects in a scientific paradigm. For example, it is a general truth that several peripheral phenomena including the *savage* from the cultural point of view (e.g. madmen, heathens) were not

switched into scientific analysis of human culture (see e.g. C. Kluckhohn's view on 'culture as a theory'; Kluckhohn 1961: 25). So, while it is true that the development of psychology and psychiatry in a way helped also to widen the perspective of other disciplines studying man and his environment, there can probably be observed an even more coherent progress allied with the field of psychosemiotics. In this area it is expedient to mention Estonian scholars J. Valsiner and J. Allik whose well-known contribution is situated at the foundation stones of the field, especially when laying stress on the semiotic ingredient of it (Valsiner and Allik 1982). There are certainly other areas that do not belong directly to the mainstream of the semiotic discussion, but probably the Finno-Ugric presence can be noticed in several areas due to the specific contemporary history of these peoples. Of course, when talking about the general development of semiotics in terms of speaking of a discipline's development as an interaction between the central and peripheral elements, one can not escape both earlier contributions of the Finn E. Tarasti to musical semiotics from the 1970s onwards (in English see e.g. Tarasti 1979 and 1994) and his initiative excursions into philosophical, i.e. 'existential' semiotics (Tarasti, forthcoming).

Semiotics and a Finno-Ugric culture: Finland

Contemporary Finnish semiotics was in its nation-wide scale apparently born through the foundation of the Finnish Semiotic Society (1979). The first group of Finnish semioticians came from late French structuralism, but it was also in contact with the Tartu school. Its membership and the scope of interests grew fast, and by now Finnish semiotics is probably the best-organized nation-wide trend in Europe. The unusually dynamic growth of semiotics during recent twenty years in Finland (that can be followed through the journal of the Finnish Semiotic Society, *Synteesi*, from 1982 on) lead to the foundation of the International Semiotics Institute at Imatra, Eastern Finland, in 1988 — now one of the world's leading center in the field. During the recent years ISI has organized international summer schools of semiotics, and its contacts with Estonian, Hungarian Soviet/Russian, Nordic, American, French and other schools and individual semioticians are extensive. Semiotics in Finland is many faceted: semiotics of music, literature and theatre, film and art, semiotics of culture and personality. Symposia very often deal with the characteristics of Finnish people and culture. It is interesting to observe that, although they follow very contemporary themes and models (marketing, information theory, politics, gastronomy), for some traditional domains (as e.g. linguistics), there is a gap between them: traditional scholars in Finland do not use the vocabulary and ideas of semiotics (see also Voigt 1995).

The quick evolution of semiotics in Finland can be explained only on the basis of its Finno-Ugric roots — the semiotic approach in general has its firm basis in the Finno-Ugric mentality, first revealed by the fact that the main

hero of Kalevala, Väinämöinen, was a sorcerer who by his wisdom and magic, and not by force, ruled over the world. The Finns have an inclination towards meditation and philosophical questioning (not to mention such later caricaturesque figures in the Finnish literature like Veikko Huovinen's "Havukka-ahon ajattelija"; see Huovinen 1952). On the other hand, semiotics in Finland was launched by the brothers Kaarle and Julius Krohn in the late nineteenth century, and completed in musical research by Ilmari Krohn, first professor of musicology at the Helsinki University. Their ideas for classifying the folklore, folktales, folk tunes were later adopted by the Russian formalists like V. Propp, and in music by B. Bartók and Z. Kodaly. When Propp was found among the French and American structuralists in the 1960s, the new discipline within semiotics, narratology, began. So there is a direct line leading from the Krohns to the entire rich area of narrative studies at the moment.

Moreover, the ties with Baltic semiotic traditions were important in the history of Finnish semiotics. If the first 'semiotician' in Finland was Henry Parland (1908–1929), a Finnish-Swedish poet, who wrote cultural essays as a kind of 'Barthes before Barthes', then his uncle Wilhelm Seseman (1884–1963), who was a half-Finn, has been considered the greatest philosopher in Lithuania whom even A. J. Greimas knew before his emigration.

These traditions were found when the Finnish semiotics, during its rapid rise in the 1980s, searched for a 'noble origin' and history of its own. But still a great part of semiotic research in Finland focuses on the Finnish or 'Finno-Ugric' specificity albeit most semiotics exercised by the Finns attempts to be as universal as the science always should be.

Semiotics and a Finno-Ugric culture: Estonia

While it is clear that the role of the Hungarian and Finnish semioticians in determining the development of contemporary semiotics is hardly questionable, this can not be said of Estonian scholars. Beginning from J. von Uexküll up to the influential figures of cultural semiotics until very recently, one can only admit the role of Estonian cultural space as having favored the development of semiotic argumentation. Of course there can be listed several names whose output can be regarded as semiotic, but at a closer look we find their terminology loose and, probably in connection with the influence of German philosophical influence, ignorant of their contemporary semiotic treatments characterizable as already semiotics proper. A vague borderline between the use of culturological and culturo-philosophical general bias of expressing views on cultural developments, and modern attitude marked by more coherent and already at least presemiotic argumentation style can be associated with the (largely unknown both for Estonian and international audience) works of Uku Masing (1909–1985) that are extensively being printed only nowadays (e.g. Masing 1993, 1995). Thus it seems that, when trying to outline the merits of Estonia in the new complex of studies in Finno-Ugric semi-

otics and if wanting to delineate the semiotic features, structures and developments of this particular cultural area, there are exactly the wider linguistic, cultural and national aspects to be analyzed.

When speaking of the field of Finno-Ugric semiotics, it seems necessary to differentiate between two paradigmatic aspects: on the one hand we can speak of the metalevel and 'semiotics proper' in the disciplinary sense of the expression. On the other hand we should probably consider also semiotic development and the development of semiotic conceptions and viewpoint at the sociocultural scale of Finno-Ugrians in the sense semiotic interpretations are used in everyday cultural discourse. Such cultural discourse includes different topics beginning from issues pertaining to cultural and national identity to e.g. public criticism of cultural life (discussions on exhibitions, presentation of a given culture and *socium* internationally, etc.). It has often been argued that such topics belonging to the core of cultural identity are not discussed among the relevant society and that the cultural practices in which these core items manifest themselves, are largely automatic. However, it would probably be useful to differentiate between dissimilar techniques of building and using the so-to-speak habitual doxic universe (see Bourdieu's treatment of the theme; Bourdieu 1992), and also between different items belonging to it. In more isolated and in the so-called primitive cultures the non-questioned status of the cultural nucleus concerns both the cultural units it comprises, and also norms regulating the usage of these units. In other cultures that are subjected to more intense international and intercultural communication, it seems to be inevitable that the communicative habits and cultural life style is systematically brought to conscious reflective practice in order to maintain a stable position in intercultural interaction. Therefore it seems that a considerable amount of cultural units belonging to the nuclear elements of the sociocultural reality are to be switched into active semiotic use to keep the national and cultural identity discourse integral.

Due to the specific geopolitical location of Estonia there has always been a strong need for the above described intracultural dialogue to facilitate preservation of cultural self-awareness. Estonian military and political history have urged cultural self-determination as related to the *others* also in terms of what has been considered as forming the core of cultural identity. Therefore there have been brought to discussion the elements and semiotic systems regarded as culturally the basic ones on the one hand, and semiotic techniques applied to the usage of them on the other hand. The overall Estonian public semiotic activity reached its first contemporary peak in the middle of the 19th century during the first period called National Awakening. Probably greatly due to the suppression of the Estonian language by different foreign powers that had been ruling the Estonian area, a major attention has been paid to language from that stage of cultural identity discourse onward. The role of language as a means of mediating this discourse and further publication of the latter was recognized immediately, and so the status of language and written documents started to gain special attention and authority. It was Carl Robert

Jakobson (1841–1882), one of the few decisive figures in the process of forming the shared consciousness of individuals living in the territory of the present Estonia, who articulated the central position taken by language in the national and cultural identity. In his *Three Speeches on/for Fatherland* (1868–1870) Jakobson expressed quite a characteristic view on language as “the foremost thing, however, from which a nation’s degree of mental education can be recognized” (Jakobson 1991: 21). Thus language is attributed a kind of metacultural role — “Language is the vehicle of a nation’s education, and thus it is what gives birth to its [the nation’s] fine order and freedom, it is the most precious heritage of a nation” (ibid.). In a way then we can see that language and a culture, and a culture as semiotically definable as a *signifying order* (the term used by M. Danesi and P. Perron; Danesi 1998, Danesi and Perron 1999) are indeed related to the study of cultural spaces as related to the original concept of *culture area* as developed by P. Vidal de La Blache and H. Mackinder (see e.g. Vidal de La Blache 1926). Cultural traits by which cultural areas can be determined anthropologically are a type of manifestation of the signifying order, which is largely configured by natural language (following this logic, see Randviir, forthcoming). Thus one could see evidence of organizing semiotics on the metalevel also as a study of different signifying orders that can be classified on the basis of language groups, and it will probably imply more coherent studies than those arranged according to the specific individual categories of objects of research.

Having mentioned Jakobson as one of the most important public figures for the formation of the Estonian nation, we simultaneously witness the beginning of a tendency to determine the essence of the *Estonian* as distinguishable from *the others* through opposition. There have been diverse bases for building the relevant system of opposition(s), e.g. according to the national principle (the Estonian vs. the Russian or the German), religious aspects (Estonians as religious people vs. Estonians a pragmatic profane people; Estonians as having *their own* pagan belief vs. Estonians as Christians, etc.). It is perhaps typical that national and cultural self-definition as based on oppositional character gains actuality during such decisive periods or in such cultural situations that involve more factors directly influencing cultural behavior. Stagnation in cultural identity discourse can be noticed during especially calm political environment, be such tranquility due to independent well being of a nation (in case of Estonia during the approximate period between 1920s–1930s), or due to forced political situations (e.g. the Soviet period of Estonia). Similarly it seems to be characteristic that reflections on cultural identity have been active in the Diaspora of Estonian culture. Hereby it is convenient to refer to Oskar Loorits, a cultural philosopher in matters pertaining to outlining what constitutes the *Estonian* culturally and psychologically. He is a suitable representative of the Diaspora in Sweden where there actualized several cultural oppositions needed to be solved (Estonia vs. Estonian SSR, Estonia vs. USSR, Estonia vs. Russia, Estonia vs. Sweden, etc.). It seems quite characteristic that due such oppositional plentitude that lead to a demagogical

deadlock, Loorits finally reduced the binaries to the contrast between the great nations and the small ones, comparing the history of the former to a “motion picture with exciting scenes, shocking conflicts and surprising trick-solutions” (Loorits 1951: 14). Estonian history, on the other hand, is “a monumental mosaic picture compiled of bits and pieces collectively by all generations that is enlivened and spiritualized by the harmonious synthesis of man and nature up to cognition of the divine not only in oneself, but everywhere” (ibid.). Loorits thus makes a distinction between the great and the smaller nations on the basis of different degrees of cultural reflective (rather than actual) activity, stating that peoples small in number are to stabilize their culturo-historical development by continuous conceptual return to the past, because the “essence of a nation lies in its past” (Loorits 1951: 10). Such reflective practice helps to minimize and soothe potential oppositional situations inside the given culture; homogenization of history through its transfer into a coherent cultural tradition involves swap of stress from individuals and their merits to the nation as an integral agent in the historical process. A similar look has been taken by U. Masing who, discussing about the mentality of the Estonians, conjoins the linguistic and grammatical (e.g. absence of the future tense and gender), geographical (as concerning the landscape) and general spiritual features of Estonians under a vague common denominator of the “unicellular amoeba” that is growing in all directions in its integral development (from the article *On Estonian Spirit* included in Masing 1993: 163).

While distinctive oppositions have been characteristically set on the basis of ‘big vs. small’, there have also been made trials to switch the Estonian culture into a wider multicultural oicoumene, probably in order to inscribe a more confident position of the nation in intercultural communication. These attempts have usually been made on either linguistic or geographical basis, connecting the latter with the cultural dimension. Attempts to define cultures in spatial, linguistic and other terms have been made in both intracultural dialogue on identity, and also on the metalevel. It is possible to differentiate between two major trends in suchlike association of the Estonian cultural space with a wider context: on the one hand there is the linguistic approach, and on the other hand we can find the geographic one. Needless to repeat that neither of them appeals to linguistic or geographic features only, but rather treat the subject in the terms of cultural areas. The linguistic division has the expression ‘Finno-Ugric’ as the common denominator, while the geographic bias has used the term ‘Balto-Skandia’. The Finno-Ugric trend can well be illustrated by the works of the already mentioned cultural philosopher O. Loorits who’s approach can, in turn, be viewed as following the ideas of classical cultural anthropology in its manner of explaining the substantial nature of cultures and cultural individuality (see e.g. C. Kluckhohn’s classical treatment; Kluckhohn 1961: 20–40). Loorits describes the common past of the Finno-Ugric peoples as having its origins in the ‘Uralian culturehood’ that, as an integral whole of life-style and behavioral patterns, together with environmental features, was imprinted into the collective mind of all the Finno-Ugric

peoples. The gradually more and more local settlement induced the kinship consciousness that was essentially molded by natural conditions dominated by the forest (Loorits 1951: 35). Such mentality shaped by the woodland seems to be another macrosignified manifesting itself in other Finno-Ugric cultures as well (see e.g. Tarasti 1999). Hereby we will not go into deeper analysis of the semiotic features based on the Uralian common cultures that, according to Loorits, must be considered as essential also nowadays during the process of both primary and secondary socialization (see Loorits 1953); this is — as at least a reflective task — for the future.

The other general view on the relationships between the Finno-Ugric cultures and their kinship with other Scandinavian and Baltic cultures is perhaps best represented by the works of the Estonian geographer E. Kant. His views on the Finno-Ugric unity (from the Estonian viewpoint) represent schemes of geographic proximity between (only few) Finno-Ugric peoples. In Kant's view Estonia belongs environmentally and thus also culturally to the geographic and cultural area of Balto-Skandia (cf. W. Ramsay's *Fenno-Skandia*). It is in a way interesting that Kant's understanding of territorial structures was functional (which, in fact, was common to his era) — one of the main factors in the case of his description of the unity of the Balto-Skandic space being religious homogeneity in the face of Christianity (cf. Loorits and many other thinkers who have religiously conjoined the Finno-Ugric peoples with having their own unique religion connected with their specific life-style). Since the anthropo-ecological view on such territorial and cultural unified semiotic space like Balto-Skandia, as widely treated by E. Kant (see e.g. Kant 1934, 1935), has recently been given a historical and theoretical overview (Buttimer 1994), the matter needs no further discussion in detail in the current context.

Whereas the above hopefully endorsed contributions of certain Finno-Ugrians to the general advance of semiotics, this is obviously just a minor aspect the Finno-Ugric semiotics should concentrate on. Especially the position of Estonian cultural space seems to point at that it is not only the individuals are to be included into suchlike semiotic research, but rather the respective culturo-national factors favoring (or not) semiotic development.

Filling up Finno-Ugric semiotic studies in the future

International cooperation among Finno-Ugric semioticians is not a new phenomenon. They have known of each other, and since very many years Finnish and Hungarian semioticians, Finnish and Estonian semioticians regularly meet by combining these meetings. In May 1997 there was the 19th Finnish-Hungarian semiotic symposium in Budapest, and between November 26–28 in 1998 the 20th symposium in Berlin. There exist a few reports also about the previous meetings (see Broms 1995, 1997). Following this line in a more extensive scale, a primary task for the Finno-Ugric Semiotics Association is first of all facilitation of information exchange that perhaps can be coordi-

nated by the ISI, together with the new association, in Imatra. Through symposia and publications the Finno-Ugric semiotics is to reach to a "handbook" of itself (whether in a concrete written form or not) in order to bring the theme clearly also to wider international semiotic dialogue, since general international semiotics has been relatively unaware of it. Until now Finnish, Hungarian and Estonian (the latter as having been included to 'semiotics in the USSR') semiotics have been represented in one of the best handbooks of the recent history of semiotics (Sebeok and Umiker-Sebeok 1986), but as these chapters were written more than a decade ago, a new (or at least updated) version, with regards to as many Finno-Ugric peoples as possible, should be composed.

From the 1960s to the 1990s there was the "new golden age" of semiotics in Europe, America and elsewhere. Today semiotic institutions have gained certain stability, even though most of the pioneer semioticians have passed away. Now we witness the "silver age" of international semiotics, as new centers or schools appear (other ones, e.g. from France, disappeared). The Tartu–Moscow school in its original form does not exist any more. Hungarian semiotics remained as loose a formation as it was ever. Finnish semiotics has become one of the leading groups in the whole world. The growing trend of the Finnish tradition (it is hereby noteworthy that the rapid evolution of it came along with the formation of an institutional structure, as mentioned above), and also the re-organized practice in Estonia, point, in fact, at another possible development. While the mentioned "golden age of semiotics" was, all in all, still determined by individual works and scholars, the contemporary stage of semiotic studies clearly has integration as a common denominator. This integration concerns several semiotic (sub)paradigms, viewpoints, objects of study, scientific communities and individuals. Cooperative projects (e.g. those initiated in Finland) imply studying native or local cultural objects and themes internationally, just as well as inspection of cultural phenomena involves application of diverse semiotic tool-kits that were not considered as unifiable even recently. Therefore, hoping that Finno-Ugric semiotics will add qualitatively new perspectives to the study of national cultures in their intertwined nature, one could also look forward to its contribution to bringing clarity to the overall integrated net of semiotic objects and metalanguages in general.

References

- Bourdieu, Pierre 1992. *The Logic of Practice*. Cambridge: Polity Press.
- Broms, Henri 1995. *Valami más: Proceedings of the Finno-Hungarian Semiotic Symposia 1985–95 Helsinki-Budapest*. Helsinki.
- 1997. *Valami egészen más: Proceedings of the Finno-Hungarian semiotic symposia 1996–97*; Vol. 2. Helsinki.

- Buttimer, Anne 1994. Edgar Kant and Balto-Skandia: *Heimatkunde* and regional identity. In: D. Hooson (ed.), *Geography and National Identity*. The Institute of British Geographers Special Publication Series; 29: 161–183. Oxford, Cambridge, Massachusetts: Blackwell.
- Danesi, Marcel 1998. *Sign, Thought, and Culture: A Basic Course in Semiotics*. Media, Communications and Culture Studies. Toronto, Ontario: Canadian Scholars' Press.
- Danesi, Marcel; Perron, Paul 1999. *Analyzing Cultures: An Introduction and Handbook*. Advances in Semiotics. Bloomington: Indiana University Press.
- Deely, John (ed.) 1995. *Thomas A. Sebeok bibliography 1942–1995*. Arcadia bibliographica virorum eruditorum; 15. Bloomington: Eurolingua.
- Huovinen, Veikko 1952. *Havukka-ahon ajattelija*. Porvoo: WSOY.
- Jakobson, Carl R. [1870] 1991. *Kolm isamaa kõnet*. Kriitiline väljaanne käsikirjast. Tallinn: Eesti Raamat.
- Kant, Edgar 1934. *Estlands Zugehörigkeit zu Baltoskandia*. Publicationes Universitatis Tartuensis Oeconomico-Geographici; no. 9. Tartu.
- 1935. *Bevölkerung und Lebensraum Estlands. Ein Anthropökologischer Beitrag zur Kunde Baltoskandias*. Tartu: Akadeemiline Kooperatiiv.
- Gluckhohn, Clyde 1961. *Mirror for Man: A Survey of Human Behavior and Social Attitudes*. Greenwich: Fawcett.
- Konakov, Nikolai I. 1993. Die Kalendersymbolik des Uralischen Heidentums. In: Tarasti, E. (ed.), *On the Borderlines of Semiosis*. Acta Semiotica Fennica II. Publications of the International Semiotics Institute at Imatra, 4: 121–125.
- Limerov, P.F. 1993. The reconstruction of cosmological ideas of the Komi. In: Tarasti, E. (ed.), *On the Borderlines of Semiosis*. Acta Semiotica Fennica II. Publications of the International Semiotics Institute at Imatra, 4: 127–130.
- Loorits, Oskar 1951. *Eestluse elujõud*. Enskede: Tõrvik.
- Loorits, Oskar 1953. *Pagulaskodude kasvatusmuresid*. Vadstena: Tõrvik.
- Masing, Uku 1993. *Vaatlusi maailmale teoloogi seisukohalt*. A. Lääts, toim. Tartu: Ilmamaa.
- 1995 *Eesti usund*. A. Lääts, toim. Tartu: Ilmamaa.
- Randviir, Anti forthcoming. The nationalism of signs. In: Tarasti, E. (ed.), *Acta Semiotica Fennica*.
- Sebeok, Thomas 1942–1945. See Deely 1995.
- Sebeok, Thomas and Umiker-Sebeok, Jean (eds.) 1986. *The Semiotic Sphere*. Topics in contemporary semiotics. New York: Plenum Press.
- Shapiro, Valerij 1993. The zoomorphic code in the symbolism of children's furniture of the Komi people. In: Tarasti, E. (ed.), *On the Borderlines of Semiosis*. Acta Semiotica Fennica II. Publications of the International Semiotics Institute at Imatra, 4: 139–146.
- Synthesei: Taiteidenvälisen tutkimuksen aikauslehti* (1982–) E. Tarasti (päätoim.). Helsinki.
- Tarasti, Eero 1979. *Myth and Music: A Semiotic Approach to the Aesthetics of Myth in Music especially that of Wagner, Sibelius and Stravinsky*. Approaches to Semiotics; 51. The Hague: Mouton.
- 1994. *A Theory of Musical Semiotics*. Advances in semiotics. Bloomington-Indianapolis: Indiana University Press.

- (Forthcoming). *Existential Semiotics*. Advances to Semiotics. Bloomington-Indianapolis: Indiana University Press.
- ed. 1999. *Snow, Forest, Silence: The Finnish Tradition of Semiotics*. Acta Semiotica Fennica VII. Imatra, Bloomington: Indiana University Press.
- Uljashov, Oleg 1993. Semantik der Metalle in der Weltanschauung des Komi-Volkes. In: Tarasti, E. (ed.), *On the Borderlines of Semiosis*. Acta Semiotica Fennica II. Publications of the International Semiotics Institute at Imatra, 4: 131–137.
- Valsiner, Jaan and Allik, Jüri 1982. General semiotic capabilities of the higher primates. In: Key, M.R. (ed.), *Nonverbal Communication Today: Current Research*. Berlin, New York: Mouton, 242–257.
- Vidal de La Blache, Paul 1926. *Principles of human geography*. E. de Martonne, ed. New York: H. Holt and Company.
- Voigt, Vilmos 1977. *Bevezetés a szemiotikába*. Budapest.
- 1990. Auf den Spuren einer uralischen (Vor)Semiotik. *Specimina Sibirica* III: 241–250.
- 1995. The taste of Finnish semiotics. *Semiotica* 106(3/4): 301–306.
- Voigt, Vilmos; Balázs, Géza (eds.) 1998. *A magyar jelrendszerek évszázadai*. Budapest.



ISSN 0206-2798
ISBN 9985-56-542-8