University of Tartu

Σημειωτική

Sign Systems Studies

37 (1/2)

Sign Systems Studies

37(1/2)

Тартуский университет
Tartu Ülikool

Труды по знаковым системам

Töid märgisüsteemide alalt

37(1/2)

University of Tartu

Sign Systems Studies

volume 37(1/2)

TARTU UNIVERSITY PRESS

Tartu 2009

Sign Systems Studies is an international journal of semiotics and sign processes in culture and living nature
Periodicity: one volume (four issues) per year
Official languages: English and Russian; Estonian for abstracts

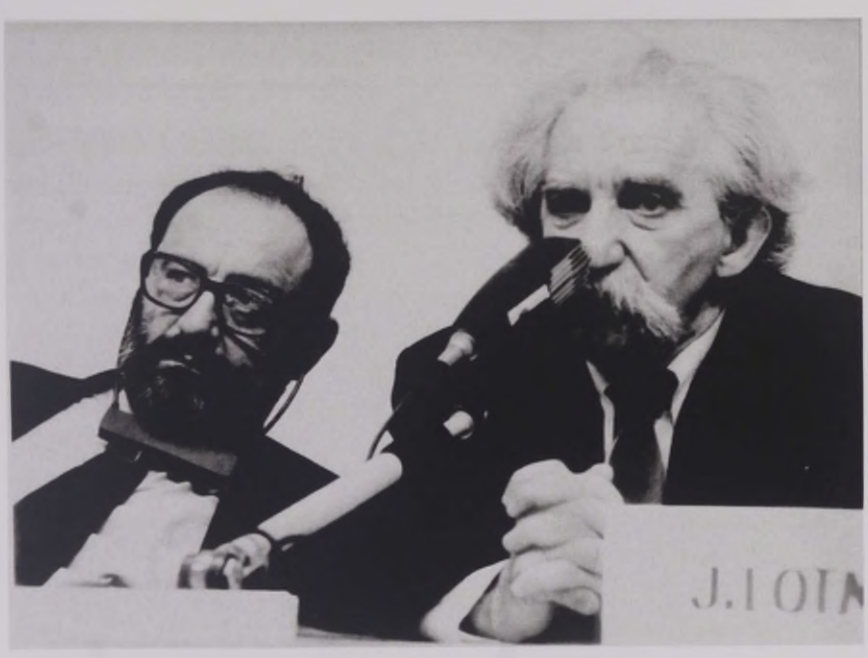
Established in 1964

Address of the editorial office:

Department of Semiotics, University of Tartu
Tiigi St. 78, Tartu 50410, Estonia
Information and subscription: *http://www.ut.ee/SOSE/sss*

ISSN 1406–4243

Tartu University Press
www.tyk.ee



Umberto Eco and Juri Lotman, during Lotman's visit to Italy
(Milan, 1987)

From the editors

During the last years *Sign Systems Studies* has received a growing number of high-level contributions over all branches of semiotics, and thanks to our contributors can serve internationally among the major journals in the field.

Increasing number of contributions requires corresponding development in our publishing policy. Since the current volume 37, *Sign Systems Studies* has changed the numbering of issues within volumes. In order to be more flexible, there will now be four issues per year, but for a better thematic arrangement of papers some will still be published as double issues.

The journal has also seen changes in the list of international editorial board with the inclusion of Marcel Danesi and Jaan Valsiner. The team of editors has been restructured and includes now six members: Kalevi Kull, Kati Lindström, Mihhail Lotman, Timo Maran, Silvi Salupere and Peeter Torop. The new enlarged team of editors replaces the former national editorial board.

We thank Peeter Veromann (Eesti Loodusfoto Publishers) for improvements in the design.

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Opposition theory and the interconnectedness of language, culture, and cognition

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Abstract. The theory of opposition has always been viewed as the founding principle of structuralism within contemporary linguistics and semiotics. As an analytical technique, it has remained a staple within these disciplines, where it continues to be used as a means for identifying meaningful cues in the physical form of signs. However, as a theory of conceptual structure it was largely abandoned under the weight of post-structuralism starting in the 1960s — the exception to this counter trend being the work of the Tartu School of semiotics. This essay revisits opposition theory not only as a viable theory for understanding conceptual structure, but also as a powerful technique for establishing the interconnectedness of language, culture, and cognition.

Introduction

The founding principle of structuralism in semiotics, linguistics, psychology, and anthropology is the theory of opposition. The philosophical blueprint of this principle can be traced back to the concept of dualism in the ancient world (Hjelmslev 1939, 1959; Benveniste 1946). It was implicit in Saussure's (1916) own principle of *différence*. In the 1930s the Prague School linguists (Trubetzkoy 1936, 1939; Jakobson 1939) and several Gestalt psychologists (especially Ogden 1932) gave the principle its scientific articulation and, in the subsequent decades of the 1940s and 1950s, it was used to carry out extensive analyses of languages and to establish universal patterns in

linguistic structure. It was also expanded tentatively in the same era to encompass the study of the conceptual structure of language. However, by the 1960s, work and debate on such extensions of the theory came abruptly to a halt with the advent of two movements — generativism in linguistics (Chomsky 1957) and post-structuralism in semiotics (Derrida 1967) — both of which caught on broadly within their respective disciplines.

At the start of the 1990s several powerful defenses of opposition theory by Andrews (1990; Andrews and Tobin 1996) and Battistella (1990, 1996) came forward to revive interest in it. However, the crystallization and spread of yet another movement in linguistics, known as cognitive linguistics, once again relegated opposition theory to the margins of linguistics. However, as will be argued and illustrated in this paper, the theory of opposition is hardly antithetical to the basic principles of cognitive linguistics. It is actually implicit in its fundamental blueprint for language study. My purpose here is to revisit opposition theory as theory of language, mind, and culture, extending it as well to the domain of cognitive linguistic theory. The theory can, moreover, be seen to raise such fundamental semiotic questions as: Are human codes interconnected to each other through oppositional structure? Does such structure exist in reality or is it projected onto reality by the human mind? Is human cognition itself oppositional, as reflected in the fact that the brain has two hemispheres that process information in a complementary binary fashion? By revisiting the theory, and expanding it to encompass new forms of research in both semiotics and linguistics, it may be possible to answer such questions concretely.

Background

As mentioned, the basic idea behind opposition theory is ancient, going back to philosophies based on dualism, such as the Chinese *ying/yang* mystical framework and Aristotle's logical dualism (Ogden 1932; Babin 1940; Bocheński 1961; Deely 2001; Anfindsen 2006).

Dualism found its way into radical Cartesian philosophy in the sixteenth century — a philosophy that went so far as to claim that the mind and the body were separate entities. But the Cartesian view was more of an aberration than a continuation of ancient dualism, which actually sought to understand the relation between the body and the mind, not their independence. Certainly, the kind of dualism envisioned by the early structuralists was not Cartesian in any sense of the term, since it actually suggested that words were both sound-based and conceptual phenomena and, thus, simultaneously auditory-acoustic and mental forms. In fact, the implicit philosophical idea in early structuralism was that the human mind is inclined by its nature to perceive the world in terms of opposites. This is probably due to the fact that much of human anatomy is structured in a symmetrical binary way — we have a left and right hand, eye, ear, foot, etc. Among the first to make this implicit principle a target of empirical investigation were, in fact, the early founders of psychology, such as Wilhelm Wundt (1880) and Edward B. Titchener (1910). Their research agenda led to the establishment of structuralism in psychology and to its theoretical cross-fertilization in semiotics, linguistics, and anthropology.

Saussure (1916) put forward the notion of *différence* as being a particularly useful one for explaining how we extract meaningful (or more exactly meaning-bearing) cues from the chain of speech in oppositional terms. His analysis led to the theory of the phoneme as a differential unit of sound. Then, in the late 1920s, the Prague School (the Prague Linguistic Circle) adopted opposition theory as the basis of their approach to the study of language structure (Jakobson *et al.* 1928; Jakobson 1932, 1936; Trubetzkoy 1936, 1939, 1968; Pos 1938, 1964), thus establishing structuralism broadly as the primary *modus operandi* in linguistics and semiotics (Wallon 1945; Parsons, Bales 1955; Godel 1957; Lévi-Strauss 1958, 1971; Blanché 1966; Chomsky, Halle 1968; Belardi 1970; Ivanov 1974; Needham 1973; Fox 1974, 1975; Lorrain 1975; Jakobson, Waugh 1979). Indeed, no distinction was made between the term 'structuralism' and linguistics for several decades.

The first in-depth theoretical study of opposition as a theory of mind was Charles Ogden's 1932 treatise, *Opposition: A Linguistic and Psychological Analysis*, which elaborated upon several key ideas discussed in 1923 by Ogden and Richards in *The Meaning of Meaning*. Ogden claimed that a small set of conceptual oppositions, such as *right/left* and *yes/no*, appeared to be intrinsically binary in nature and that these were found across cultures. Others showed "gradience" between the two poles. For example, in an opposition such as *white/black*, various color concepts such as *gray, red*, etc. could be located between the *white* and *black* poles, a fact that clearly has both referential and conceptual resonance — gradient colors are distributed on the light spectrum, while *white* and *black* are not, forming instead conceptual endpoints on a mental color scale. Similarly, between the polar concepts of *day* and *night* on the *day/night* oppositional scale, gradient concepts such as *twilight, dawn, noon,* and *afternoon* can be inserted being, again, both referentially and conceptually appropriate. In other words, only "polar concepts", as they can be called, form a binary opposition and have, thus, paradigmatic structure in the conceptual system of a language, whereas "gradient concepts" do not — one cannot put *red* into any polar opposition with another color. Such concepts are "distributed concepts" on already-existing oppositional scales. They show, in other words, syntagmatic structure, since they are connected to the polar concepts in referential ways. Ogden also distinguished between oppositions that are cross-cultural (*right/left, day/night)* and those, like *town/country,* that are culture-specific. This suggests that there may be a "deep level" of oppositional structure that is part and parcel of human cognition, and a "surface level" that contains oppositions that are forged and acquired in specific cultural contexts. In effect, from the outset opposition theory was perceived to be a *de facto* theory of cognition, a theory that examined language as a channel through which cognitive structure gained physical form.

The Prague School linguists developed most of the technical apparatus of opposition theory by first investigating phonological and grammatical systems. And, in fact, the use of opposition theory to

study phonological systems was never abandoned by the generative movement, remaining a central aspect of its own theoretical apparatus to this day, despite some dissension within the movement (Haspelmath 2006). However, its extension to other levels, especially the semantic-conceptual one, was either relegated to the margins, resurfacing as componential analysis, or else totally abandoned under the weight of an analytic logical approach to meaning. But linguists of a different persuasion started revisiting opposition theory more broadly in the 1990s. Andrews (1990), for instance, argued that it allowed us to detect patterns of universal structure and meaning connecting language, mathematics, and other representational systems. Battistella (1990, 1996) claimed that it could be enlisted to explain several seemingly unrelated processes in linguistic change and that its extension to the study of conceptual structure and cultural representation could provide valuable insights into the relation between thought, language, and culture (see also Elšík, Matras 2006). Mel'cuk (2001) applied opposition theory to the study of sentence organization, claiming that sentences revealed a basic oppositional structure in their conceptual form. At about the same time, a few other scholars started to look at text-construction through the theoretical lens of basic opposition theory. Mettinger (1994), for example, conducted an in-depth empirical study of forty-three English-language novels, from which he isolated ten syntactic frames that he claimed were based on oppositional structure. He concluded that there were two kinds of conceptual oppositions, systematic and non-systematic, and that these played a crucial role in narratives.

Within semiotics, the spread of Peircean (1931–1958) theory, which gained momentum in the late 1960s, led to a de-emphasis on the use of opposition theory to examine conceptual structure generally. However, the Peircean approach has in no way ever been conceived to be antithetical to structuralism, with various attempts having been put forward to reconcile markedness (a derivative of opposition theory) with iconicity theory (for example, Andersen 1989, 2001, 2008; Tomic 1989). Also within the field, the analytical tradition of the Tartu School under the leadership of Juri Lotman (1991) never abandoned the basic

idea expressed by the Prague School linguists that oppositional structure may have been the conceptual glue, so to speak, that connected different codes to produce culture as an integrated sign-based phenomenon (see Andrews 2003 and Lepik 2008). In the same way that biological codes are interconnected in the biosphere, so too cultural codes are interconnected in what Lotman called the semiosphere. The goal of semiotics and linguistics is, in this framework, to show how such interconnectedness unfolds in concrete ways through language, art, magic, ritual, etc.

Types of opposition

The Prague School linguists uncovered many different types and levels of opposition. They did this by means of a simple commutative method. For example, by commuting a specific sound in a word such as *cat*, changing it to *rat* or some other minimal form *(bat, hat*, etc.), one could establish the phonemic status of its constituent sounds — in this case initial /k/. A pair such as *cat/rat* was called a "minimal pair" by Trubetzkoy (1939). Using this simple technique, the Prague School linguists discovered many aspects of phonological structure. They found, for instance, that some phonemes occurred in many minimal pairs, while others did not. This came subsequently to be known as the "functional yield" of a phoneme. The phoneme /p/ in English has a high functional yield since it is distinctive in word-initial (*pin/bin*), word-internal *(open/omen*), and word-final *(nap/nab*) position, and can be found in opposition with virtually every other consonant phoneme of that language. Research also showed that oppositions often revealed what came to be called "symmetry" (Pos 1938; Jakobson 1939; Trubetzkoy 1939; Martinet 1960). For example, the voiceless stops /p/-/t/-/k/ form the natural set of voiceless stops. Within that set, each phoneme can be put in binary opposition with the others: /p/-/t/ *(pin/tin*), /p/-/k/ *(pin/kin/*, etc. Similarly, /b/-/d/-/g/ forms the corresponding natural set of voiced stops, which has a similar "set-internal" oppositional structure: /b/-/d/ *(bin/din)*, /b/-/g/ *(bet/get*), etc.

Moreover, the consonants in the two sets can be put in opposition to each other: /p/-/b/ *(pin/bin)*, /p/-/d/ *(pen/den)*, etc. The opposition-signaling feature between the two sets is, of course, [±voice]. This suggested to the linguists that phonological systems possessed symmetry. However, they also discovered asymmetries or gaps in such systems — in English, there exists an opposition between the voiceless dental and palatal sibilants, /s/-/ʃ/ (*sip/ship*), but since there is no voiced palatal consonant in that language, then there is no corresponding oppositional partner to the voiced dental sibilant /z/ (as in *zip*).

By conducting extensive analyses of this type, the Prague School linguists started to notice that there were specific articulatory triggers in phonemic contrasts. For example, in /m/-/p/ the opposition was triggered by a *nasality/orality* contrast, but in /m/-/n/ it was triggered instead by a *bilabial/dental* differentiation. These came to be called "distinctive features". Thus, in the "cross-set" oppositions /p/-/t/-/k/ and /b/-/d/-/g/ the critical distinctive feature is, as mentioned, [±voice]. Within each set, other distinctive features marked the oppositions: for example, the feature that kept /p/ and /t/, as well as /b/ and /d/ distinct, was [±labial]. Distinctive feature analysis became a mainstay early on and was adopted a little later by generative linguistics, under the influence of Jakobson (Jakobson *et al.* 1952; Jakobson, Halle 1956; Jakobson 1968). It continues to be used to this day under the rubric of Optimality Theory (McCarthy 2001). Distinctive features were differentiated from redundant features, such as the aspirated [p^h] in English, which occurs in word-initial position only before a vowel: *pat, pot, pill, pin*, etc. If /s/ is put before the consonant, the aspiration is blocked: *spit, spill, spunk, spat*. Aspiration of /p/ is thus a predictable feature of English phonology — when /p/ occurs in word-initial position followed by a vowel it is aspirated. It is a redundant, not a distinctive, feature. Since the two phones, [p] and [p^h] are connected to each other in the way just described, they are said to be allophones that complement each other — where one occurs the other does not. The rule that specifies the way in which allophones complement each other came to be called a rule of complementary distribution.

Work on distinctive features led to a typology of oppositions (Trubetzkoy 1939). The main ones are worth repeating here:

- A *multidimensional opposition* is one in which the distinctive features that are common to both phonemes also occur in other phonemes: for example, /p/ /t/, and /k/ share the features [+stop] and [-voice]; but they also share [+stop] with the [+voice] counterparts /b/, /d/, and /g/.

- A *one-dimensional* or *bilateral* opposition is one in which the features common to both phonemes do not occur in other phonemes.

- An *isolated opposition* is one that occurs between two specific phonemes but nowhere else in the phonemic system.

- A *proportional opposition* is one that is found in two phonemes and is repeated in other phoneme pairs: for example, /d/-/t/, /b/-/p/ = [+voice]/[-voice].

- A *privative opposition* is one in which pairs are distinguished by only one feature: for example, /p/-/b/ = [±voice].
- A *gradual opposition* is one that involves varying degrees of a feature: for example the [open] feature of vowels.

- An *equipollent opposition* in which pairs are distinguished by several features, /b/-/ð/ and /v/-/g/ are distinguished by [±labial] and [±stop]

Sometimes, two sounds can be shown to have phonemic status in certain minimal pairs, but not in others. In English, for example, the vowels /i/ and /ɛ/ are phonemic, as can be seen in minimal pairs such as *beet/bet*. However, some speakers pronounce the word *economics* with an initial [i], others with an initial [ɛ]. When this occurs, the two sounds were said to be in *free variation*, a phenomenon that is seen as having an "outside" or "extralinguistic" effect on the phonemic system. The actual pronunciation of a phoneme can, of course, also vary from speaker to speaker, which may be due to geographic, social, or other extralinguistic factors. All this suggested to the Prague School linguists, before the crystallization of sociolinguistics as a branch of general linguistics, that it may be possible to set up socially-variable opposi-

tions. For example, an opposition such as *formal/informal* might manifest itself as a difference in pronunciation, vocabulary, or some other linguistic phenomenon.

As work in structuralism gained momentum in the 1940s and early 1950s, inevitably the question arose as to the psychological validity of opposition. As interesting as it was, did it really explain linguistic competence or the language faculty, or was it no more than an artifact of the fertile minds of the Prague School linguists themselves? It was Jakobson (1942) who first tackled this question head on. By studying child linguistic development, he noted, for instance, that phonemic oppositions that occur rarely are among the last ones learned by children. Nasal phonemes exist in all languages. And, thus, they are among the earliest phonemes acquired by children. On the other hand, laryngeals are relatively rare and, consequently, are among the last phonemes to be acquired by children. Jakobson found many other features of linguistic development that fit in perfectly with the theory of opposition (Jakobson; Waugh 1979). In effect, as Jakobson's work showed, the Prague School was starting to entertain broader implications of opposition theory before structuralism was marginalized by the various movements and forces mentioned above.

Certainly, one of the questions that opposition theory begs is its extension beyond form to content. For the sake of convenience, therefore, oppositions can be divided into *form-based* and *conceptual*. Phonemic oppositions are form-based ones, since they allow us to recognize physical cues in words that are distinctive. Conceptual oppositions, on the other hand, involve content or meaning distinctions. Oppositions such as *day/night* and *right/left* are conceptual. The method for determining them does not involve the commutation techniques used in phonemic analysis, but rather the more general notions of antonymy, contrast, and contrariness (Mettinger 1994). Early on, it was thought that the same kind of distinctive-feature analysis used in form-based methodology could be extended to identify conceptual oppositions. Pairs such as *father/mother, son/daughter*, for example, could be shown to be conceptually distinct in terms of features such as [±human], [±gender], [±adulthood], etc. These came

to be known generally as *semes* (Hjelmslev 1959; Coseriu 1973; Pottier 1974), which could then be subdivided into *classemes* (subcategories). Although this seemed to constitute a useful way of establishing the denotative meanings of lexical items, it often produced strange or unrealistic results. An opposition between *heifer* and *dog (female)*, for example, can be given as either [+bovine]/[-bovine] or [-canine]/[+canine]. There really is no way to establish which one is, conceptually, the actual trigger in the opposition. Moreover, when certain words are defined in terms of semes or classemes, it becomes obvious that to keep them distinct one will need quite a vast array of semes (Schooneveld 1978). The whole exercise could thus become convoluted, artificial, and self-referential. Moreover, in reality conceptual features are often sensitive to sociocultural meanings. Although the term *bitch* does exist in English to refer denotatively to a female dog, it is rarely if ever used any longer because of the social connotations it has taken on. It is obvious that the larger "meaning picture" is critical in expanding and refining opposition theory. Semes can, of course, be used practically to categorize lexemes into semantic fields. For example, items marked by the feature [+seat], such as *chair, sofa, desk, bench*, can be assigned to the same semantic field. Within that field they can be further distinguished from one another according to how many people are accommodated, whether a back support is included, what relative size each one is, and so on. Research on identifying a universal set of such features is ongoing, but it has yet to yield a set of features that is not ultimately self-referential (see, for instance, the insightful work of Wierzbicka 1996, 1997, 1999, 2003). Unlike phonological systems, which are closed form-based systems, semantic systems are open-ended conceptual systems and, thus, constantly changing to meet new social needs.

The Prague School linguists and early Gestalt psychologists themselves realized that conceptual oppositions presented many technical and theoretical problems. Abstract concepts, such as "fatherhood," "femininity," "hope," and "justice," for instance, are particularly high in connotative content, and although they can be put on a binary scale — *fatherhood/motherhood, femininity/masculinity*, etc. — that

very scale is open to connotative gradience (Bolinger 1968). Among the first to examine connotative gradience in a systematic fashion were the psychologists Osgood, Suci, and Tannenbaum in 1957, who introduced the concept of *semantic differential* to do so. They argued that connotative (culture-specific) meanings could be measured by using such polar concepts as *young/old, good/bad,* etc. and asking subjects to rate a concept on seven-point scales, with the polar concepts constituting the end-points of those scales. The ratings were then collected and analyzed statistically. The number seven was chosen, incidentally, because the year before George Miller (1956) had shown, in a study titled *The Magical Number Seven, Plus or Minus Two: Some Limits on Our Capacity for Processing Information* that the ability to process meaning cues or bits of information was limited to between 5 and 9 equally-weighted errorless choices. To grasp how the semantic differential works, suppose hypothetically that subjects are asked to rate the concept "ideal father" in terms of oppositional scales such as *practical/idealistic, flexible/stern,* etc. The outcome would yield a connotative profile of "ideal fatherhood". Results near the end of the scales (say, 1.4 or 6.4) would indicate high connotative content; results near the middle of the scales would indicate neutrality and, thus, equipollence in the oppositions. Research utilizing the semantic differential has shown that the range of variations is not a matter of pure subjectivity, but forms a socially-based pattern. Younger people may tend to rate the ideal father as being flexible, older ones as stern, and so on. In other words, the connotative indices of abstract concepts are constrained by psychological and cultural variables.

Although very promising as a method for fleshing out social meanings, the semantic differential has never really caught on broadly. A common critique of the technique is that the poles used (*practical/idealistic, flexible/stern,* etc.) are themselves artifacts, put there by the researchers to unconsciously guide subject choices along a certain path that is itself culture-specific. In other words they show what analysts want to show. But even if the scales are determined in advance, the results obtained may be unexpected ones and thus the whole technique would be legitimate as a form of randomized experimentation.

From the outset, the Prague School linguists realized that oppositions were not limited to being necessarily binary. For example, the tense system of English has a basic ternary oppositional structure — *present/past/future*. It was found that oppositions can be strictly binary (*right/left*), ternary, four-part, graduated, or cohesive (set-based). The type of opposition that applies in the analysis of some system depends on what system (language, kinship, etc.) or subsystem (phonemic, semantic, etc.) is involved. Anthropologist Claude Lévi-Strauss (1958), for example, showed that pairs of oppositions often cohered into sets forming recognizable units within specific cultural codes or systems. In analyzing kinship systems, Lévi-Strauss found that the elementary unit of kinship was made up of a set of four oppositions: *brother/sister*, *husband/wife*, *father/son*, and *mother's brother/sister's son*. A decade later, Algirdas J. Greimas (1966, 1970, 1987) introduced the notion of the "semiotic square" — a model of opposition involving two sets of concepts forming a square arrangement. Given a sign such as the adjective *rich*, Greimas claimed that we determine its overall meaning by opposing it not only to its contrary *poor*, as in binary oppositional analysis, but also to its contradictory *not rich* and to the contradictory of its contrary, *not poor*. This makes logical sense, of course, because one can be *not poor* and still not be *rich*. This type of analysis allows us to use contradictories such as *white/non-white* and link them to contrary terms such as *white/black*. And, as already discussed, by the 1990s opposition theory was being revisited in the light of its previous applications to the study of conceptual systems, in line with the claims of early structuralists and especially the Copenhagen School of linguists, led by Hjelmslev (1939, 1959), who argued that oppositions existed as purely conceptual forms, underlying all languages independently of how they were delivered (vocally, graphically, manually). In effect, language itself had an "evaluative superstructure", as it came to be called more generally, that was oppositional in its overall makeup and design.

It is beyond the purpose here to delve into the merits and weaknesses of notions such as n-ary opposition, the semiotic square, Copenhagen School linguistics, and other modifications to basic

opposition theory. Suffice it to say that the historical value of such debate lies in having shown that oppositional relations might involve various structures and modalities other than purely binary ones in the determination of distinctiveness, contrariness, and contradiction. Along with the semantic differential, opposition theory in general suggests that there may be levels and scales of opposition that determine how we extract meaning from concepts. Barthes (1967) too had argued that ternary and four-part oppositional structures surfaced frequently in specific codes. In the fashion code, for instance, these included *tight fitting/closely-fit/loose/puffed-out* for what he called *d'adjustement,* and *open/side-by-side/closed/crossed/rolled-up*, for *clôture.* Structuralist approaches to advertising theory (Nöth 1987, 1997; Danesi 2006) have also shown that advertising textualities are based on underlying oppositions that reach deeply into the mythic unconscious.

Several questions remain that a revised and extended approach to opposition theory must attempt to address. First, what is the relation between form-based and conceptual oppositions? Are all concepts either polar — that is, forming a binary *(right/left, day/night,* etc.), ternary *(present/past/future*), etc. opposition — and others gradient, falling in between the polar concepts? The topic of further research in this domain will be taken up below.

Markedness

Early work revealed that many polar concepts seem to be formed on the basis of an overriding meta-opposition: *presence/absence.* In *day/night* for instance, *night* is typically conceived by people as being "absence of daylight", while *day* is never conceived analogously as being "absence of night time". So, it became obvious that polar concepts related to each other in terms of a "markedness" relation — *night* is marked with respect to *day*, which is perceived to be the "default" or "present" concept in the opposition. An opposition may, however, be equipollent if no markedness relation can be established or if there is a syncretism of two oppositions. For example, in the

give/accept opposition, either pole could be assigned "default" (unmarked) status, depending on the situation or viewpoint of the users of the opposition. So, sometimes other criteria must be enlisted to determine markedness relations, such as frequency. In language, the marked pole is generally more constrained than the unmarked pole in the type and number of combinations it may enter into, in the type and range of form changes it may undergo, in the frequency with which it occurs, and so on (Tiersma 1982; Eckman *et al.* 1983). This is perhaps why Trubetzkoy (1975: 362) defined markedness as the asymmetrical relation whereby one pole is more constrained than the other pole on a particular level (see also Chomsky, Halle 1968; Hertz 1973; Jakobson and Waugh 1979; Waugh 1979, 1982). As Battistella (1990: 2) observes, the principle of markedness comes from the fact that "the terms of polar oppositions at any level of language are not mere opposites, but rather that they show an evaluative non-equivalence that is imposed on all oppositions".

Psychologically, markedness has many profound implications. Above all else, it constitutes an unconscious conceptual reflex that subsequently guides language form and use. For example, when an opposition such as *tall/short* is involved in a speech situation, we ask instinctively "How *tall* are you?" not "How *short* are you?" because, unless there is a specific reason to do otherwise, we assume *tallness* to be the default pole, called the *unmarked* one, while the other pole, being exceptional or constrained, is the *marked* one.

Markedness theory was applied to both form-based and conceptual oppositions and found to undergird the whole structure of language. For example, in the indefinite article system of English grammar, /a/ is the unmarked morph, since it occurs before all consonants in the chain of speech (*a boy*), while /æn/ is the marked one, because it occurs before vowels (*an apple*). The markedness criterion in this case is frequency, since there are more words beginning with consonants than vowels. However, frequency does not always play in role in assigning markedness status. For example, *grape* is less marked than *grapes* on the morphological level, since the singular form is typically the unmarked one on this level. However, on the semantic and dis-

course levels the singular *grape* is the marked one since the plural form *grapes* is referentially more common and thus unmarked. Early markedness theory seemed, from the outset, to provide truly profound insights into the interconnectedness of linguistic levels and their relation to the external world of reference and reality, including social structure. In Italian, for example, the masculine plural form of nouns referring to people is the unmarked one, referring (nonspecifically) to any person, male or female, whereas the feminine plural form is marked, referring only to females. For instance, *i bambini* (which is masculine in form) can refer to all children, whereas *le bambine* refers specifically to female children. The fact that the unmarked form in Italian is the masculine gender is a cue that Italian society is historically male-centered. Changes in the markedness in the morphological system of Italian correspond to changes in social structure with regard to gender.

Research has, in fact, shown that in societies (or communities) where the masculine gender is the unmarked form, it is the men who tend to be in charge, while in societies (or communities) where the feminine gender is the unmarked form, the women are the ones who are typically in charge. In other words, the markedness built into grammatical structure mirrors social structure (Alpher 1987; King 1991). Markedness theory can thus be seen to be a diagnostic tool for unraveling unequal social relations and codes of power. Terms like *chairman*, *spokesman*, etc. are examples of how the English language predisposed its users to view certain social roles in gender terms in the recent past. Their replacements (*chair, spokesperson,* etc.) show how the oppositional poles in the evaluative superstructure of language can be neutralized. Indeed, markedness theory suggests that we can potentially change social structure by changing linguistic structure. Consider job designations as a case-in-point. Over the past sixty years, as women increasingly entered into traditionally male-based occupations, their presence was perceived to be a deviation from tradition. Logically, their job titles were marked linguistically by adding suffixes such as *-ess* to words (*waitress*, *actress*, etc.). Elimination of this suffix

today is, in effect, a linguistic validation of women's place in the professional workforce.

Suffice it to say that markedness theory has had enormous implications not only for the study of linguistic structure, but also for the study of the interconnectedness between language, cognition, and culture. Obviously, the extension of markedness theory to other codes (music, gesture, mathematics, etc.) might reveal similarly interesting phenomena (see, for example, Andrews 1990; Schuster 2001; Hatten 2004, Vijayakrishnan 2007; Danesi 2008). A fascinating study by van der Schoot, Bakker Arkema, Horsley and van Lieshout (2009), for instance, examined the effects of the opposition *consistent/inconsistent* within a relevant arithmetic operation and markedness (the relational term being unmarked ["more than"] vs. marked ["less than"]) on word problem solving in a sample of 10–12 year old children differing initially in problem-solving skill. The researchers found that less successful problem solvers will utilize a successful strategy only when the relational term is unmarked. In another significant study, Cho and Proctor (2007) found that when classifying numbers as odd or even with left-right keypresses, performance was better with the mapping *even-right/odd-left* than with the opposite mapping. Calling this a *markedness association of response codes* (MARC) *effect*, the authors attribute it to compatibility between the linguistic markedness of stimulus and response codes. The MARC effect and its reversal are caused by a correspondence of the stimulus code designated as positive by the task rule with the positive-polarity right response code. Markedness has also been found empirically to play a role in language learning and development generally (Collins 1969; Eckman *et al.* 1983; Park 2000; Mansouri 2000; Prieto 2005), discourse structure (Barbaresi 1988), and in other areas of human cognitive, communicative and representational activity. Overall, the work on markedness in human conceptualization generally validates Jakobson's initial findings, or at least their general implications — namely that opposition theory is a psychologically predictive and diagnostic tool.

Post-structuralism

It is accurate to say that opposition theory, or at the very least its markedness subtheory, continues to have a role to play in investigating human codes and learning, even outside the purview of structuralism strictly defined. Its use in generative phonology, language acquisition studies, and mathematics, to mention a few areas, indicates that it continues to hold a strong intuitive appeal across disciplinary domains as a framework for understanding human cognition. However, as mentioned above, by the 1970s, work on opposition theory *per se* came to a virtual standstill, especially within semiotics, as so-called post-structuralism took center stage. The post-structuralist stance was fashioned as a direct assault on markedness theory, presenting a clear challenge to the whole notion of opposition and thus structuralism.

Spearheaded by the late Michel Foucault (1972) and especially Jacques Derrida (1967), the post-structuralist movement gained a foothold in semiotics, cultural studies, and philosophy throughout the 1970s and 1980s probably because the Zeitgeist was ripe for such a movement, because notions such as authorship, narrative, interpretation, and the like were starting to become problematic ones in these fields (see Belsey 2002 and Mitchell and Davidson 2007 for in-depth analyses of post-structuralism). Post-structuralists were mainly literature scholars or culture analysts who had a particular social or ideological agenda in mind. As such, they attacked the very tool that allowed them to flesh out problems in social systems in the first place — opposition/markedness theory. In other words, they somehow failed to see this very theory as a tool for diagnosing social inequalities. On the contrary, they saw it as underlying and validating them. Marginalized groups thus saw the attack against structuralism as an opportunity for overall vindication. But it is becoming more and more apparent that post-structuralism resulted from a fundamental misinterpretation of opposition/markedness theory. Foucault and Derrida not only did not realize that the theory had a diagnostic value, but actually saw it as a form of political discourse aiming to enshrine inequalities such as *self/other*. Derrida in particular argued that it was a

logocentric theoretical concoction, which itself rendered it useless, since it encoded "ideologies", not "realities." In some ways, Derrida had made a valid point. In pairs such *day/night* it is easy to accept *day* as the unmarked form and *night* as its marked counterpart. This does not mean that one is more basic than the other in any absolute sense, but rather that it is perceived to be that way for a historical or psychological reason. Problems emerge, however, with oppositions such as *male/female* and *self/other*. But the post-structuralists missed an underlying principle, discussed above in this paper — namely, in such cases, the choice of one or the other as the unmarked polar concept would clearly reflect a cultural (not an absolute) markedness. As mentioned, in patrilineal societies the unmarked form is likely to be *male*; but in matrilineal ones, as for example the Iroquois one (Alpher 1987), the unmarked is just as likely to be *female*. This fact was either unknown to the post-structuralists or conveniently ignored.

Derrida (1977: 237) went so far as to claim that our oppositions deconstruct themselves when analyzed reflectively, that is, they fall apart, revealing their idealized origins:

> In idealization, to an origin or to a "priority" seen as simple, intact, normal, pure, standard, self-identical, in order *then* to conceive of derivation, complication, deterioration, accident, etc. All metaphysicians have proceeded thus: good before evil, the positive before the negative, the simple before the complex, the essential before the accidental, the imitated before the imitation, etc. This is not just *one* metaphysical gesture among others; it is *the* metaphysical exigency.

This passage reads more like a diatribe against a certain tradition, than a true rejection of opposition theory, since it uses that very theory to construct the diatribe. And, needless to say, Derrida failed to see that oppositions can be, and often are, reversed. This has happened, for example, to the *young/old* opposition in western society. At the turn of the twentieth century, *old* was seen as the unmarked form in terms of social status. By the 1920s a marketplace youth culture emerged to make *young* the unmarked one. Today, being young and staying young for longer and longer periods is the accepted norm (Danesi

2002). Such reversals exist across the domain of conceptual oppositions. They certainly do deconstruct themselves, as Derrida claimed, but in so doing they are reversing the markedness criteria or else neutralizing them.

It is, of course, impossible to refute deconstruction theory on its own rhetorical terms. It is a classic example of *post hoc propter hoc* reasoning. And this might explain why it has started to show signs of decline and of waning. It is, and always has been, more of an "anti-theory" than a paradigm shift within linguistics and semiotics. Now that the dust has settled in semiotics, it has become increasingly obvious that anti-theories have only temporary influence in scientific endeavors.

Expanding the structuralist paradigm

The analysis of the interconnections between linguistic oppositional structures and cultural-cognitive modalities was always implicit in the groundbreaking work of the Tartu School of semiotics (Lotman 1991; Andrews 2003; Lepik 2008). Lotman was among the first to envision culture as a system of interconnected codes shaped by historical processes. His approach to the language-culture-cognition nexus was broached in a general way by Danesi and Perron in 1999. However, they did not utilize the concept of opposition in their model of interconnectedness directly, although it was implicit in their use of image schemata theory *(up/down, closed/open,* etc.). The interconnectedness approach can, in fact, be informed by the fact that oppositions are encoded in various cultural systems through a network of representational interconnections. As an example of how a single binary opposition might be so encoded, consider the *right/left* one (Needham 1973; Danesi 2007). This is derived, anatomically, from the fact that we have a left hand (and foot, leg, ear, and eye) and a right one. Now, this anatomical fact has been encoded in an opposition that carries a markedness criterion along with it — *right* is unmarked and *left* is marked. Here are a few of the ways in which this surfaces

culturally. First, it intersects with other oppositions — *right* is associated with *good*, *light*, etc. and *left* with *evil*, *dark*. This synchronization of oppositional poles can be shown as follows:

right	/	*left*
↕		↕
good	/	evil
↕		↕
light	/	*dark*
↕		↕
day	/	*night*
↕		↕
etc.		*etc.*

This synchronization shows why we associate "leftness" with "evil" and both of these with "darkness", and so on, and why, by contrast, we associate "rightness" with "goodness", "light", and so on. The associations are connotative, of course, and they are involved in generating rhetorical, aesthetic, and other textual structures. For example, in Michelangelo's *Last Judgment* in the Sistine Chapel, Christ condemns sinners to Hell with his left hand but points good people to Heaven with his right hand. The word *right* is used commonly to convey concepts of "correctness", "truth", "justice", in English and many other languages. In the United States, *The Bill of Rights* is a legal document that lays out the "rights" to which each person is entitled, and a "righteous" person is defined as someone moral, and thus without guilt or sin. English has adopted the Latin word *sinister* ("left") to refer to something evil. Offering a handshake, saluting, or taking an oath with the left hand is considered improper and wrong. The list of the manifestations of the *right/left* oppositional network is a huge one. Similar networks can be established for other oppositions. Cumulatively these would show that our conceptual, representational, aesthetic, and ritualistic systems are interconnected in oppositional ways through connotative synchronizations of this type.

It is to be noted that in such a model of culture and cognition there is a fundamental *positive/negative* evaluation of various poles that establishes the markedness criteria throughout the network. In the above network the *negative* pole is the *marked* one and thus stands out cognitively and representationally. Also, the question of gradience can now be handled by locating gradient concepts in a similar synchronous fashion. For example, in the network above, one could locate concepts such as *benevolence, kindness,* etc. as gradient ones on the *good/evil* polar scale and *morning, noon, twilight*, etc. as similarly gradient ones on the *day/night* scale, and so on.

Now, the question of the etiology of such conceptual systems emerges. The plausible reason why we have come to assign positive values to the *right* end-point of the *right/left* scale and negative ones to the *left* pole probably stems from the fact that the majority of human beings use their right hands instinctively from birth to carry out routine tasks. Only about 10 percent of people are naturally left-handed. As a consequence, the right hand is perceived to be the default form of human handedness. This type of reasoning suggests that markedness is hardly a phenomenon of Nature. Nature makes no social distinctions between right-handed and left-handed individuals, nor associates negative and positive values accordingly; people do. In a society where left-handedness is the norm (should there be one), then the marked pole would be *right* in the oppositional scale. As can be seen by examining the opposition sets above, determining which member of a pair is the unmarked form and which one the marked one is a matter of tradition and history, as Lotman had persuasively shown. *Good*, for example, has always been assumed to be the default form of human behavior in many societies, while *evil* has always been perceived to be its antagonistic counterpart. And, by and large, people living in communities aspire to conduct themselves for the betterment of the community, while a few do not. Narratives, paintings, and the like bring this out either directly or satirically (as the case may be).

This type of analysis can be called "Systems Analysis" (SA), to adopt a term used by Sebeok and Danesi (2000) in reference to studying semiosis in terms of modeling systems theory. In the Sebeok-

Danesi approach, SA entails looking at how models emerge and coalesce to produce semiosis in and across species. In the analysis of cultural networks of oppositions, the term SA can be used more specifically as a method for investigating the idea that models and the codes to which they belong have oppositional structure and that they are interconnected through synchronization.

One of the tasks of SA would be to document and investigate how language and other codes mirror social and cultural processes. Another would be to determine which oppositions are more general or universal in the hierarchy of oppositions present in a network. Some seem to have universal status, including *masculine/feminine*, *light/dark*, *good/evil*, *self/other*, *subject/object*, *sacred/profane*, *body/mind*, *nature/culture*, *beginning/end*, *love/hate*, *pleasure/pain*, *existence/nothingness*, *left/right*, *something/nothing*, among others. These can be called "meta-oppositions", a term used already in this paper. Yet another main task of SA would be to determine which concepts are polar and which are gradient. Consider bodies of water. In English, words such as *lakes*, *oceans*, *rivers*, *streams*, *seas*, *creeks*, and so on are used commonly. These are gradient concepts located on a *water/land* oppositional scale. Now, people living in the desert have very few words for bodies of water, for obvious reasons. So, such concepts would not play as much of role in their culture as they do in others. In the latter, further oppositional refining, as it may be called, emerges. For example, size may enter the classificatory picture to produce lower-level conceptual oppositions — *ocean/lake* — as does width and length — *river/stream* — among other features. Another task of SA would be to investigate how a specific oppositional network manifests itself in representational, ritualistic, linguistic, aesthetic, and other cultural behaviors.

One of the most important tasks of SA would be to apply opposition theory to the investigation of figurative meaning. As mentioned, the movement known as cognitive linguistics (CL) came to the forefront in the 1980s, after the publication of Lakoff and Johnson's groundbreaking book, *Metaphors We Live By* (1980). Since then, the movement has become not only an alternative to generative linguistics and formal

semantics within linguistics proper, but also a highly valuable framework for semiotic, anthropological, and psychological analyses of the interconnectedness of language, cognition, and culture (Langacker 1987, 1990, 1999; Gibbs 1994; Lakoff, Johnson 1999; Dirven and Verspoor 2004; Danesi 2004; Geeraerts 2006; Müller 2008). Without going into details here, suffice it to say that CL has documented the fact that cultural meaning emerges from associations among concepts, called *conceptual metaphors* or more generally *blends* (Fauconnier and Turner 2002; Müller 2008). The idea behind the whole CL enterprise is that the human mind seeks to understand reality by blending domains of meaning through bodily, historical, and affective processes. For example, by linking animals to human personality, we are seeking to understand the latter in terms of the former. This is why we interpret sentences such as "He's a fox", "She's an eagle", and so on, as personality constructs. It is not the denotative meaning of the animals that is built into the sentences, but rather their connotative (cultural) meanings. Upon closer reflection, this whole process can be seen to be the consequence of an ontological opposition: *humans/animals*, with *animals* being the marked pole. This suggests that opposition operates in an ontological way to produce figurative meaning. Gradience in this case is the actual allocation of specific animals onto the scale — "John is a gorilla", "Mary is a snail", etc.

Lakoff and Johnson trace the psychological source of such polarity and gradience to mental image schemata that are produced by our sensory experiences of locations, movements, shapes, substances, etc. as well as our experiences of social events and of cultural life in general (Lakoff and Johnson 1980, 1999; Lakoff 1987, Johnson 1987). Upon closer analysis, these turn out to be meta-oppositions: *up/down*, *back/front*, *near/far*, *full/empty*, *balance/unbalance*, etc. Their manifestations occur in language ("I'm feeling up today", "Inflation is going down at last", "I'm full of memories", "My sense of timing is out of synch", etc.) and in other codes. For example, in music the *up/down* opposition is expressed by the fact that the higher tones express *happiness* and the lower ones *sadness*. This *up* is synchronized to *happiness* and *down* to *sadness* across the network of codes in a culture.

Consider again the opposition *humans/animals* discussed above. In western culture, it not only surfaces in discourse about human personality, but also in the naming of sports teams (*Denver Broncos, Chicago Bears, Detroit Tigers,* etc.), which imparts a certain character to the team in terms of perceived animal qualities, in the utilization of fictional or cartoon characters *(Bugs Bunny, Daffy Duck,* etc.) to represent human personality types, in assigning surnames and nicknames *(John Fox, Mary Wolf,* etc.), and so on and so forth.

Concluding remarks

The goal of SA is to investigate opposition theory as a framework for studying interconnectedness in cultural systems. Among the tasks and questions it will have to broach (some of which have already been mentioned), the following is only a minimal list:

- Which kinds of concepts are polar and which are gradient? It would seem that some emotion concepts (*love/hate, happiness/sadness,* etc.), metaphysical concepts (*existence/nothingness, unity/multiplicity,* etc.), mathematical concepts *(even/odd, prime/composite,* etc.), and various others surface as polar across cultures. Others seem to surface as gradient, occurring between poles in an opposition. This is the case for example of color concepts (*red, blue,* etc.) and temporal concepts (*noon, afternoon,* etc.), which are locatable between polar concepts such as *light/dark, day/night,* and so on.

- Which polar concepts are universal and which are not? It would seem that those that are purely binary *(right/left)* cut across cultures. However, this would have to be investigated and examined more empirically.
- How is markedness assigned in a polar opposition? What kind of criteria apply to the establishment of markedness?

- How many oppositions are n-ary in a culture? Within n-ary oppositions where do the gradient concepts occur?

- What is the intrinsic relation between opposition theory and conceptual blending?

- How does synchronization unfold in specific cultures? Are there any aspects of synchronization that are universal?

- To what extent are codes oppositional in structure and how is the evaluative superstructure of codes utilized to create texts of all kinds, from narratives to scientific theories?

- Is oppositional structure specific to human semiosis or does it cut across semiosis in all species? I would argue that it does not, while others may argue differently (Nöth 1994). Nevertheless, this is a key question for both semiotics proper and biosemiotics.

These are of course only a handful of questions that can be asked within the framework of SA. As has been argued in this paper, the time has come to reactivate opposition theory research in a revitalized form of structuralism that can embrace current models of meaning coming out of CL and other domains (biosemiotics, mathematical philosophy, etc.). But perhaps the most fundamental question of all that such a revitalized structuralism begs is the following one. Since oppositional concepts have existed across time and across cultures to encode some of the most metaphysically important questions humans have devised, is oppositional structure in the world or in the mind? In other words, do we understand the world in oppositional terms because we ourselves are structured to do exactly that and, thus, are blocked from ever really understanding the true nature of reality? Or is the world itself oppositional in structure and all we are doing is discovering how this is so?

In sum, as one of the most important achievements of the Prague School, opposition theory continues to have validity, despite countermovements that have emerged to either attack it or replace it with other models of meaning. It is one of those notions that has always been implicit in human affairs, but which needed articulation in a concrete scientific way. That articulation gave birth to structuralism which, itself, is a throwback of ancient philosophies that surfaced in

mythic, religious, and philosophical forms. As social critic Camille Paglia (1992: x) has so aptly put it, it reveals a basic truth about human experience: "All objects, all phases of culture are alive. They have voices. They speak of their history and interrelatedness. And they are all talking at once!"

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Теория оппозиций и соотносимость языка, культуры и восприятия

Теорию оппозиций всегда считали основой структурализма в современном языкознании и семиотике. Как аналитическая техника она до сих пор используется в них в качестве основного приема/ инструмента для нахождения значимых частиц в физической форме знака. Но как теория понятийной структуры она была отвергнута под влиянием торжествующего с начала 1960-х гг. постструктурализма (единственным исключением тут является Тартуская школа). Статья рассматривает теорию оппозиций в качестве не только весьма эффективного средства при анализе понятийных структур, но и как великолепную технику для выявления связей между языком, культурой и восприятием.

Opositsiooniteooria ja keele, kultuuri ning taju seotus

Opositsiooniteooriat on kaasaegses keeleteaduses ja semiootikas alati peetud strukturalismi alustalaks. Analüütilise tehnikana on opositsiooniteooria neil aladel jätkuvalt põhivahendite seas. Seda kasutatakse märkide füüsilises kujus tähenduslike vihjete leidmiseks. Kuid mõistelise struktuuri teooriana on see alates 1960ndatest võidukäiku teinud poststrukturalismi mõjul hüljatud — ainsaks erandiks siinkohal Tartu koolkonna semiootika. Käesolev artikkel käsitleb opositsiooniteooriat mitte ainult kui vägagi toimivat teooriat mõisteliste struktuuride analüüsimiseks, vaid ka kui suurepärast tehnikat keele, kultuuri ja taju omavahelise seotuse tõestamiseks.

Language in social reproduction: Sociolinguistics and sociosemiotics

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Abstract. This paper focuses on the semiotic foundations of sociolinguistics. Starting from the definition of "sociolinguistics" given by the philosopher Adam Schaff, the paper examines in particular the notion of "critical sociolinguistics" as theorized by the Italian semiotician Ferruccio Rossi-Landi. The basis of the social dimension of language are to be found in what Rossi-Landi calls "social reproduction" which regards both verbal and non-verbal signs. Saussure's notion of *langue* can be considered in this way, with reference not only to his *Course of General Linguistics*, but also to his *Harvard Manuscripts*.

The paper goes on trying also to understand Roland Barthes's provocative definition of semiology as a part of linguistics (and not vice-versa) as well as developing the notion of communication-production in this perspective. Some articles of Roman Jakobson of the sixties allow us to reflect in a manner which we now call "socio-semiotic" on the processes of transformation of the "organic" signs into signs of a new type, which articulate the relationship between organic and instrumental. In this sense, socio-linguistics is intended as being socio-semiotics, without prejudice to the fact that the reference area must be *human*, since semiotics also has the prerogative of referring to the world of non-human vital signs.

Socio-linguistics as socio-semiotics assumes the role of a "frontier" science, in the dual sense that it is not only on the border between science of language and the anthropological and social sciences, but also that it can be constructed in a movement of continual "crossing frontiers" and of "contamination" between *languages* and disciplinary environments.

1. Critical sociolinguistics

In one chapter of his *Saggi Filosofici* (*Philosophical Essays*), the Italian version of which is edited by Augusto Ponzio (Schaff 1978: 121–139; now in Schaff 2003), Adam Schaff proposes a method for founding the discipline called "sociolinguistics". At the time in which the essay was written this discipline was still considered a "young" field of research, at least in its independent determination in comparison with the other sciences of the language. Schaff starts off from the very term "sociolinguistics", which was a neologism at that time, to consider the two components, the "social" and the "linguistic", connected by — what he calls — a "reciprocal relation" (Schaff 1978: 123). Talking about reciprocity eliminates any alleged separation often implicit in expressions like "language and society" that assume the separate existence of a language without society or of a society without language, the existence of a language before society, or *vice versa*. Schaff says that this is certainly not a new problem, if we consider that these aspects were studied long before the denomination "sociolinguistics" opened the way for setting up an independent field of research.

Schaff divides this reciprocity into two perspectives corresponding to the goal and the competence of sociolinguistics: "A) Influence of language on society; B) Influence of society on language" (Schaff 1978: 123).

At this point, it is necessary to make a clarification that is not of only terminological value. It is well-known that in many languages including German (and Schaff writes his essay in German), there is only one word to define both Italian words *lingua* and *linguaggio*, whereas in other languages, the difference between the two words ('*lingua*' and '*linguaggio*') permits a better expression and comprehension of the relative conceptual differences[1]. '*Linguaggio*' is the specifically human modelling device, preceding the need for communication and objectified in products consisting of verbal and non-verbal

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[1] The Italian terms '*linguaggio*' and '*lingua*' have been translated using the word 'language' but where it is necessary to distinguish one from the other, the Italian term has been left in Italian between inverted commas (Translators' note).

signs; whereas '*lingua*' is the result of this modelling in the field of verbal signs (see Ponzio 2002: 54–55). We may add to these definitions that, as Rossi-Landi claims, '*linguaggio*' consists of "*lingua* in addition to common speech", that is to say natural language within the framework of all those common interlinguistic techniques by virtue of which it is possible to understand and translate (Rossi-Landi 1980 [1968]). Therefore, when Schaff employs the term '*die Sprache*', it is necessary to consider the different ideas, which come between the two corresponding terms in Italian.

As for point A), the influence of language on the society, Schaff writes:

> Language is born from society especially as a resonance to man's need to communicate; in this sense it is a social product, a product of the social cohabitation of men. But, once it is born, language starts to exert an effect on social life and this occurs in different ways (Schaff 1978: 124)[2].

On the one hand there is the problem of how thought and human knowledge are linguistically forged — here we can use the term "language" — that is, we could also say "are forged in the language". Schaff calls it "linguistic noetics". On the other hand there is, however, a field of research which concerns the influence of language on human activity, which Schaff calls "pragmalinguistics".

Not all scholars accepted that "the social" assumes central importance in the first of the two issues. In fact, for many scholars the way how thought and human knowledge get linguistically forged, is a question concerning individual factors. As an example we can quote venerable Chomsky, who denies value to a science called "sociolinguistics" since in his generative grammar the innate structures in human beings make language possible both as competence and performance. Another example would be the articulated trends which deal with the "mind-body" problem from the neurobiological perspectives. According to Schaff, however, the linguistic noetics concerns the

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[2] Schaff's quotes come from the Italian translation of his book. The English version is from the translator of the present article.

social aspect, since we are "concrete subjects in the knowledge process" (Schaff 1978: 124) and not isolated individuals, "we always think with the help of and within the framework of a specific language" which represents "the necessary means of knowledge of *social* order" (Schaff 1978: 124). Here the term "*lingua*" is rightly used but the deliberate ambiguity with the more general term "*linguaggio*" is by no means out of place, since Schaff's positions are critical both towards the innate Chomskyan universalism and the extreme relativistic theory, which insists that human thought is completely submerged in natural language so that it is influenced by the natural language according to a differential influx. According to Schaff, sociolinguistics receives "one of the constitutional elements of its true field of scientific competence" from the specific problems of the linguistic noetics, as well as its "concrete tasks of research" (Schaff 1978: 130).

Twenty-five years after the publication of the Polish philosopher's essay, we can still say that these tasks are related to the fact that we "think linguistically", in the dual and complex sense that we think in language, but this language is the (social) product of the activity that we call "*linguaggio*" which models the human world as a social world in its innate principles. We may also say: we think *inter-linguistically*, the mother tongue itself is multilingual, in the sense that our entry to "*linguaggio*" through "*lingua*", our abandoning the infant condition, already assumes sociality and plurality of signs of which "*linguaggio*" is made up (not only verbal ones).

As we have said, "pragmalinguistics" concerns the influence of language on human activity" (Schaff 1978: 130). According to Schaff, a very important component of this field of research and the work of sociolinguistics is represented by the analysis of the influx of language on stereotypes, a topic which Schaff later developed in his book entitled *Stereotypes and human behaviour* (Schaff 1987). It is very significant that this element of analysis is contemplated within the framework of what we may rightly define "critical sociolinguistics", that is the sociolinguistics whose tasks include analysing and making generally understood the role of linguistic manipulation, not only for speculative reasons but for overall social behaviour. Stereotypes always

imply an emotional component, induce social behaviour, and produce value systems and ideologies (Schaff 1978: 134). In this regards, sociolinguistics may formulate questions like: "How do value systems existing in society change? How do they react in the sphere of social activity? How are they connected to the behaviour of socially active men?" (Schaff 1978: 135). These questions lay the precise basis for a science of language as human science in a "critical" sense.

As for the influence of society on language, according to Schaff, it may be well summarised by the definition of Hymes, one of the "fathers" of sociolinguistics, who claims that sociolinguistics must be considered as "the means of speech in human communities, and their meaning to those who use them" (Hymes 1974).

This perspective considers sociolinguistics not as a static "photograph" of the states of the language in relation to the social collocation of the speakers, but as a discipline respectful of language as a sociocultural process. Schaff intuitively knows, for instance, that at the period in which he wrote this text, an absolutely essential task of sociolinguistic research was to consider "the linguistic variations in developing Countries" (Schaff 1978: 136). Naturally, the notion of development denotes a "linear" and probably a too optimistic idea that in the light of facts proved to be extremely illusory, especially in many of those countries that were then defined "developing countries". In spite of this, the attention paied by Schaff to considering how the structural changes have a direct influence on linguistic changes, not only concerns the complex phase of post-colonial industrialisation, but can also be well suited to the current globalisation phase. Indeed, it is a question of considering the processes of sociolinguistic transformations concerning not only aspects such as enriching one's lexicon and syntactic variations, but also and fundamentally, "the pragmatics of language, that is to say its relation with social activity" (Schaff 1978: 136). This is a relation in which questions regarding the close mixture between communication and social reproduction and the connection between languages and new technologies today act in an essential way.

The sociolinguistics that considers all these aspects mentioned in Schaff's essay, has a philosophical-critical basis. According to this pro-

ject, sociolinguistics examines dynamically and problematically what is linguistic as social and what is social as linguistic. Now it is important to add a second level: the semiotic, more precisely the socio-semiotic one. By this, we mean a research field in the centre of what there is a sign, and more extensively, the verbal and non-verbal sign systems, which constitute "the social", articulated into concrete processes of meaning generation.

2. Social reproduction and the theoretical basis of sociosemiotics

We have already mentioned the fact that expressions such as "language and society" are to be avoided, because they seem to imply the separate existence of the two terms, although it is sometimes clear that expressions of this kind are used in an almost "conventional" sense, fully aware that there is no language outside society and vice versa. As Rossi-Landi says, language co-extends with society, which is of course made up of many other institutions, but sees language "interwoven in the mesh of everything" (Rossi-Landi 1985: 237). In this perspective, however, Rossi-Landi extends both the concept of "language" and that of "society", opening up the former in the direction of the "sign systems" and transcribing the second in that of "social reproduction" (Rossi-Landi 1985: 237–238). The co-extensive presence of language in society may thus express a presence of the sign systems in the complexity of social reproduction. Rossi-Landi writes: "[...] all operations of social practice, in their same essence, are sign operations" (Rossi-Landi 1972: 306).

And then:

> We need to talk about sign systems, not only of language. The question of the position of language in social reproduction is that of the position of language among the other sign systems and it must be continuously translated into this (Rossi-Landi 1985: 239)[3].

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[3] The English version of Rossi-Landi's quotes is of the translator's.

It is well known that social reproduction is always at the basis of Rossi-Landi's theoretic formulation (Rossi-Landi 1985: 27–84), "it is all the processes by means of which a community or a society survives, getting bigger or at least continuing to exist" (Rossi-Landi 1985: 238). The three phases in which it is articulated are: production, exchange and consumption. Sign systems act as movers of social reproduction and at the same time they are produced, exchanged and consumed in them. The concept of "sign system" contains the element of the completed transformation of a "body" in a "sign", that is of something residual to semiosis, (Rossi-Landi 1985: 137–166).

The sign, and more precisely sign systems, are thus the basic concepts on which sociolinguistics intended as sociosemiotics is founded. At the basis of Rossi-Landi's sociosemiotic reflection there is the topic of the production of sense in the social aspect: this reflection is characterised, as has already been mentioned referring to Schaff, as *critical*. In order to define "critical", we must refer to its dual philosophical valence. On the one hand Kantian, that is to say "critical" as an examination of the conditions which render sense possible. And on the other hand Marxian, that is to say "critical" as carefully revealing the ideological character of each manifestation of sense in society. The critical semiotic approach starts from the awareness that communicative planning and social organisation seem to have standardised human needs. By "standardisation" we mean flattening and distorting the human aspect for the unknowing repetition of communicative programs and alienated behaviour. A large part of Rossi-Landi's research concerns the same ambivalence of what he called "common speech", that is, the common condition of the possibility of natural languages, since the common sense (with stereotypes as its peak), is an integral part of and is reproduced by the natural language, and also because all the ideological connotations which survive in the language as the result of an oppressive and alienating social planning.

Apart from the tradition which refers to Rossi-Landi's reflections, socio-semiotics principally expresses itself along two other traditions: discursive socio-semiotics and social semiotics (Bernard 1995; Calefato 1997: 18–22). The fundamental lines of the former have been

developed by Algirdas Julien Greimas (1991). According to Greimas, the notion of "discourse", intended both as a linguistic entity and socio-cultural constraint (Marrone 2001: XXV), interprets the fact that a society only exists according to the sense given to it by the individuals and groups that make it up. As Greimas sees it, sense is underpinned by two fundamental organising principles: narrativity and figurality. The "semiotic object" is generated on the basis of "narrative universals", that is categories and stable operating modes, which basically use the characters of Propp's isolated narration in the magic fairy tales, on the one hand, and the taxonomic relations derived from Aristotle — contrariety, sub-contrariety, contradictoriness, complementarity, expressed in the "semiotic square" on the other.

On the contrary, the concept of "language as social semiotics" elaborated by Halliday (1983) represents the intersection point between sociolinguistics of the Anglo-Saxon area (especially Basil Bernstein) and sociosemiotics in general. Language is mainly assumed to be verbal language and therefore considered in its fundamental role in the socialising process, of transmitting culture and social system *tout court*. According to Halliday, language, organized according to a grammatical structure, contains an innate semantic potential. A relation of dependence is thus set up between the grammatical system and the semantic system, in the sense that the former structures the latter. It is the language that produces social meanings, contexts, situations. Fundamental notions resulting from this definition are 'linguistic variety', 'register' and 'dialect', considered not from the empirical point of view, that is to say as simple "recordings" of language events, but as situation contexts which are organized and signified by the language as a whole.

Halliday's legacy in sociosemiotics is currently being developed, especially in the field of communication theory, by Gunther Kress who along with Robert Hodge has authored the volume *Social Semiotics* (Hodge, Kress 1988), in which social semiotics is integrated with critical awareness influenced especially by Marxism and by Foucault. Kress and Hodge propose the principle of "logonomic systems"

intended as "A set of rules prescribing the conditions for production and reception of meanings" (Hodge, Kress 1988: 4). Those in a society who are called upon to produce and those who receive the social meanings prescribe logonomic systems, so that it is possible to distinguish between "production regimes" and "reception regimes" (Hodge, Kress 1988: 4). It is an interesting and original development of Foucault's conception of the order of discourse, suited to the mass-media communicative systems of our age.

At this point we can propose a comparison between the conceptual fields which derive from the notions of sign system, discourse, semantic potential and logonomic systems. All these fields actually concern an extension of the "linguistic" dimension from language to signification and significance. We use these two last concepts in the sense introduced by Charles Morris (1964), that is to say associating values to signs, the axiological directionality of social meanings. How do the sign systems structure these values? How do social discourses direct behaviour, prejudice, and implicit meanings of language? Which semantic potential acts as a "trigger" within a social reproduction which is today basically communication regulated by alienating logonomic systems?

Today it is possible to propose sociosemiotics which does not take the complexity of the approaches laid out here into consideration in a scholastic and schematic way, but in an open and free manner. All these approaches have valid intuitions for theory and praxis, especially in the context of the increasingly explicit development of the sign dimension of the social, in the form of general and planetary social communication which characterises our age.

3. Language and social discourse

In this respect it is obligatory to refer to another author whose work we may today consider in many senses a fundamental reference point for a semiotic foundation of sociolinguistic analysis: Roland Barthes, especially his critic of contemporary ideology and myths. In fact,

Barthes also has the merit of having introduced the critical approach to semiology (we use this term in a French speaking context referring up to at least the beginning of the 70's), having "dissected" the ambivalent ideological power of sign systems in which common sense, stereotypes and mythology of our present are organized. Barthes held, most certainly in a manner of provocation and defiance, that there is no sense what is not uttered or "spoken" by language, and that opposite to what Saussure had stated, linguistics includes semiotics (Barthes 1974a: 3–5; Barthes 1974b). Rossi-Landi has, however, always objected to Barthes, saying that verbal language is not the only big sense "container", because it, in the meaning of "language" plus "common speech", is "spoken" by the alienating linguistic structures (Rossi-Landi 1972: 11–12). The pre-eminence of linguistics, therefore, may be defiance, as it often happens with Barthes, but it can also be shaped by the situation of alienation which remains in the sphere of language.

In one of his essays of 1970, *La linguistique du discours*, Roland Barthes introduces the concept of "linguistics of the discourse" or "translinguistics" (Barthes 1970a: 191). Unlike linguistics in the strict sense, whose object is the text, the object of translinguistics is discourse (Barthes 1970a: 192). Both, says Barthes, work with a single substance, that of spoken language; but while text has a purely communicative aim, discourse varies according to further aims. Barthes suggests the following definition of "discourse":

> Any finite extension of word, unitary from the content point of view, expressed and structured for secondary purposes of communication, culturalised by different factors to those of language (Barthes 1970a: 192)[4].

As Benveniste (1971) wanted, linguistics would use the *sentence* as its upper limit, as a "link between text and discourse" (Barthes 1970a: 193); whereas the territory of translinguistics may be situated "beyond

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[4] Barthes' quotes come from the Italian translation of his article. The English version is of the translators'.

the sentence". If, writes Barthes, still following Benveniste's formulation and more generally the typical procedure of structural analysis, sense is acquired when a unit of one level is included among the units of an immediately higher level (Barthes 1970a: 193) and if the sentence is "the last level of linguistic integration and the first level of translinguistic integration" (Barthes 1970a: 194), it is on social praxis that discourse is to be articulated and to acquire its sense and its "reference" (Barthes 1970a: 194–195). In this perspective, the task of translinguistics is that of "codifying the reference", always making the notions of "context" and "situation" (Barthes 1970a: 196) stand out.

Barthes made these considerations in the phase of full maturity of his "system" (see Marrone 1994). His "provocative" preference for linguistics including semiology that contained in his previous *Elements of Semiology* and that overthrew Saussure's concept (Barthes 1974a), appears in this context to be a methodological choice for a science where each system and process of the object is modelled on spoken language in which "the subsequent signs predominate significantly over the simultaneous ones" (Barthes 1970a: 191). The succession, the linearity, the fundamental "irreversibility of the message" (Barthes 1970a: 191) which characterises the translinguistic systems thus opens, *beyond the sentence*, onto an immense territory, consisting of the whole universe of "situations", that is of the social praxis where according to Barthes, the language is exposed to "secondary communication objectives" and to "different factors" (Barthes 1970a: 191) of culturalisation.

In this framework, we may, therefore, consider language to be the product of human verbal linguistic activity, articulated in a system and in a process which gives life to infinite varieties of natural languages and is subject to the variation in history and use. Discourse, however, may be seen as putting language into practice, a communicative praxis in which the fundamental fact is that a linguistic system is rooted in its speakers and in "where" the speaker is located, in what roles and hierarchies the language produces. In the light of the definition mentioned above, it is important that those "different factors" which Barthes talks about be inserted in the verbal dimension. It is possible

to extend Barthes' notion of "linguistics of the discourse" to that of "linguistics of social discourse", where the latter refers to all the social practices of language, and where it opens to the multiplicity of "*langues*" and "*langages*" from which social communication is created. In this sense, language can not be considered without its speakers, that is to say, without its actors and its subjects "embodied" in the world. This need, which appears every time articulated language comes to the fore, is the same necessity that gave birth to sociolinguistics as a discipline characterised, unlike general linguistics, by the special attention paid to the relation between language and its speakers (Berruto 1995: 67).

All the most recent and careful research in the field of sociolinguistics and sociosemiotics, intended in the broadest sense, considers both how language changes speakers and is, in turn, modified by them, and how the same notion of "speaker" considered in the current context of communication and in relation to the role of the media in the present time, extends and not only metaphorically, to fields which go beyond the verbal level and which make even the simple definition of "environment made of words" (Simone 2000: 29–49) controversial. At this point it is interesting to reflect on the articulated and linear nature of the objects of such linguistics, since certain systems different from language but nevertheless based on it, are characterised by "simultaneity" — for instance, "simultaneity" is typical of the communication and language of digital and IT media and of the knowledge model they convey.

4. The system, the process, the social

In the introduction to the updated Italian edition of the essay *Language and Society* (now called *Language and Social Context*), originally published in English in 1972 (Giglioli 1972) and in Italian in 1973 (Giglioli 1973), Giolo Fele and Pier Paolo Giglioli introduce the texts contained in the book — fundamental texts for sociolinguistics — stating that, in general terms, this discipline "studies language as a

social phenomenon" (Giglioli, Fele 2000: 7). Sociolinguistics differs from linguistics, in the narrow sense of the term because its interests include:

> any attempt to study language not from inside the system or the code (as the linguistic tradition in the strict sense of the term does), but in any possible deviation in relation to the use that any community of speakers may make of it (Giglioli, Fele 2000: 7)[5].

Schematizing further, Fele and Giglioli claim that linguistics is interested in everything that concerns the "internal logic of the system", everything that "remains still and fixed" and that "does not depend on the context" on linguistics, whereas variability, mutability and the concrete use of any linguistic system by the speakers concerns sociolinguistics (Giglioli, Fele: 2000: 7–8). Indeed, the "linguist" examples (meaning "the linguists brought as examples") referred to by the authors, especially Bloomfield and Chomsky, belong to a linguistics that is not interested in variation, mutation, and context and that, on the contrary — as in the case of Chomsky's generative-transformational linguistics — expressly rejects these kinds of issue. In spite of this, Fele's and Giglioli's observations can not be considered pertinent to the structural linguistic tradition with semiotic background, in particular Ferdinand de Saussure on the one hand, and the Prague circle, with its evolution through Roman Jakobson, on the other.

Incorporating the study of language in a system according to a model or the structural activity, as Barthes called it (Barthes 1972: 308), means disassembling and re-assembling an "object" so that the operating rules of the "object" itself can be manifested in the disassembly/re-assembly. The structure then makes something apparent that, as Barthes says, stayed invisible in the "natural" object. Therefore, talking about a linguistic "system" allows us to perceive language not as nomenclature, but as a group of fundamental elements, dependent on one another, associated according to particular links and modelling.

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[5] The English version is of the translators'.

From the structuralist point of view, these links are defined as binary opposition links. Values are relational and combine differences.

There is an anti-structuralist prejudice in the current interpretation that denies socio-linguistic interest to these twentieth-century approaches, engaged in mainly considering the structural hold of the notion of sign (verbal or generally linguistic) inside the "system". This antistructuralist prejudice has partly been implicitly criticized here when we included Barthes's works — heir, even if "heretic" to the structuralist trend — among the main contributions to the foundation of sociolinguistics on semiotic bases. However, a further in-depth study can explain not only the limits of this prejudice, but also the complexity of the notion "social" from a semiotic point of view.

We can start with the well-known statement from the Cours de linguistique générale, written by the two pupils Bally and Séchehaye on the lectures Saussure gave between 1906 and 1911: Speech has both an individual and a social side, and we cannot conceive of one without the other (Saussure 1959: 8).

The individual side is exactly that of parole, of the single word; the social side is that of the langue, of the linguistic material which works "by virtue of a sort of contract signed by the members of the community" (Saussure 1959: 14). The "contract" element conceals the imprint of a philosophy "of exchange" at the base of Saussure's linguistics, for which "social" is synonymous with "collective" (Ponzio 1973: 153–161) and *langue* joins individuals bound to one another by a contract. However, this "social aspect" is at the basis of the notion of sign's arbitrariness, which is fundamental for Saussure's semiology. Arbitrariness, that is the fact that the signifier is unmotivated in relation to the signified, on the one hand "holds together" the linguistic system, like a game of chess as "artificial realization of what language offers in a natural form" (Saussure 1959: 88), and on the other hand it is socially established. The theme of the arbitrary nature of the sign is one of the Saussurean questions which has raised most controversy and discussion (De Mauro 1978: 414–416). Regarding the relation between the arbitrary nature of the sign and the system,

Saussure's *Cours* offers an example taken from a non verbal semiotic field, that is, the polite formulas:

> Polite formulas, for instance, though often imbued with a certain natural expressiveness (as in the case of a Chinese who greets his emperor by bowing down to the ground nine times), are nonetheless fixed by rule; it is this rule and not the intrinsic value of the gestures that obliges one to use them. (Saussure 1959: 68)

It is interesting to note how — without prejudice against the pre-eminence of the verbal that the *Cours* tends to confirm compared to other semiological systems — the example of the polite formulas allows us to understand the conventional, not natural nor symbolic nature of the sign in general. It may not be by accident that this happens when we use a non-verbal system as an example. In spite of this, almost wanting to confirm the opinion of Barthes in his *Elements of Semiology*, the previous quote proceeds as follows:

> Signs that are wholly arbitrary realize better than the others the ideal of the semiological process; that is why language, the most complex and universal of all systems of expression, is also the most characteristic; in this sense linguistics can become the aster-pattern for all branches of semiology although language is only one particular semiological system. Saussure 1959: 68)

It has been pointed out that, by virtue of a greater attention to Saussure's lessons, the concept of "arbitrary" is better defined as "unmotivated". Benveniste on the other hand, unlike Saussure's *Cours*, clarifies how the relation between signified and signifier is more necessary than arbitrary (De Mauro 1978: 415). Actually, in the structuralist logic, both "unjustified" or "arbitrary" on the one hand, and "necessary" on the other, work equally if it is a question of demonstrating the non-naturality of the linguistic sign system, first of all of the verbal one. But this non-naturality does not mean "non-social", on the contrary, in spite of all the arguments about the concept of "social" as "collective" in the context of the *Cours*, as we noted above. De Mauro underlines the fundamental importance of the relation

existing between the theme of the arbitrariness of the sign and the method of the synchronic analysis in order to recognise the central role of the element of sociality in Saussure. Synchrony and diachrony are for the *Cours* the two guiding principles of linguistic analysis: the former refers to a "state of language", the second to a "phase of evolution" (Saussure 1959: 81). If the sign is arbitrary through the coexistence of signified and signifier inside ona and the same system, it follows, as De Mauro writes: "that all the value of a sign depends, through the system, on the society which keeps the complex of the system alive in a certain way (De Mauro 1978: 424)[6].

In the *Cours*, sociolinguistics has found a paradox (called "Labov's paradox" after the name of the "father" of sociolinguistics who introduced the terms): if on the one hand it is the *langue* which constitutes the social element of the language, whereas *parole* constitutes the individual one, the importance that the former assumes in Saussure's method contrasts with the perspective of the synchronic analysis, about which the *Cours* states:

> Synchrony has only one perspective, the speakers', and its whole method consists of gathering evidence from speakers; to know to just what extent a thing is a reality, it is necessary and sufficient to determine to what extent it exists in the minds of speakers. (Saussure 1959: 90)

The paradox is: if the speaking subjects have to bear witness to the synchronic reality of the language, *parole* would be the central element in the analysis of variation, a key concept for sociolinguistics. Let us quote some more parts of the *Cours*: "It is in speaking [*parole*] that the germ of all change is found. Each change is launched by a certain number of individuals before it is accepted for general use." (Saussure 1959: 98). This is a contradiction which Voloshinov replied to well before Labov by criticising the *langue/parole* dichotomy and proposing a theory of utterance in which the social is seen in a materialistic perspective. Despite the paradoxicality, it is however possible

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6 The English version is of the translator's.

to recognize the complex value of Saussure's method, that is to say the possibility of looking at things in a dual, "two-pronged" manner.

5. From *parole* to utterance

In Saussure's *Cours* "society" is defined as a social mass, a speaking mass (Saussure 1959: 71, 77–78), compared to which the signifier, which also seems to have been freely chosen in relation to the idea it represents, appears to not be free but imposed: "The masses have no voice in the matter, and the signifier chosen by language could be replaced by no other." (Saussure 1959: 71).

Since the linguistic sign is arbitrary, it "escapes from our will", its law is a thing which is "tolerated" (Saussure 1959: 71). It is precisely the arbitrariness of the sign which "protects language from any attempt to modify it" (Saussure 1959: 73). In this sense, the strong expression that Barthes uses when he defines language "fascist" can be considered legitimate (Barthes 1981: 7–9). It is also interesting to note the reference made in the *Cours* to non-verbal sign systems like fashion, which is not entirely arbitrary, because "we can deviate only slightly from the conditions dictated by the humanbody" (Saussure 1978: 7576). In *The Fashion System*, however, Barthes contrasts this statement, by declaring — with a message directed at Benveniste — that it is not the linguistic sign which is arbitrary but in language "a general law rigidly limits the power of the users on the system" (Barthes 1970b: 217). With this, however, Barthes only confirms what is written in Saussure's *Course*, where "arbitrariness" certainly does not mean freedom of the users on the system, in fact, far from this.

However, in language, what De Mauro calls a "dialectic between continuity and transformation" (De Mauro 1978: 421), between immutability and mutability and between arbitrariness and historicity is established. If language is "all the linguistic habits which allow a subject to understand and make itself understood" (Saussure 1959: 75), in order for it to be language a "speaking mass", a social force which combines its action with that of the time is required (Saussure 1959: 76).

As has been mentioned, Voloshinov radically criticised the concept of "social" in his formulation where he defined "abstract objectivism", in which the Saussurean theory is explicitly included as it had been passed down from the *Course*. Voloshinov firstly criticises the "system" of linguistics, the offspring, he says, of philology:

> At the basis of those linguistic methods of thought which lead to the creation of language as a system of legally identical forms, there is the *practical and theoretical orientation towards a study of others' dead languages, preserved in the monuments of writing* (Voloshinov 1999: 190)[7].

According to Voloshinov, linguistics inspired by objectivism has inherited an indelible trademark of its philological origin. Although the epistemological division between linguistics and philology is explicitly declared in the Saussurean *Course*, Voloshinov does not believe that the passage has been completed. He asks what a philologist is:

> [...] the philologist is always and wherever a describer of "secret" writing and words and a master, an informer of what is deciphered and transmitted by tradition. [...] The first philologists and the first linguists were always *priests* (Voloshinov 1999: 193).

The land on which the ancient philosophy of language was constructed, says Voloshinov, consisted of the Vedic doctrine of the word, the Logos of ancient Greece and the biblical philosophy of the word. Like the ancient Vedic priest, the contemporary linguist is dominated by the magical, sacred role of the word of others with which they cannot manage to make their own word interact properly, which is experienced without feeling the thickness, as if it were a "usual dress" (Voloshinov 1999: 194).

Indeed, as has been recently discovered through the publication of Saussure's so-called *Manuscripts of Harvard*, the Indian culture held great interest for the Genevan linguist. "I, personally, do not believe in the possibility of freeing India in a summary manner" (Saussure 1994:

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[7] Voloshinov's quotes come from the Italian translation of his article. The English version is of the translator's.

99), he wrote, ridiculing the western pretence of reducing something like 3000 years of language and culture into superficial formulae. What Saussure was particularly fascinated about was the linguistic structure of the Vedic hymns, which according to him had been transmitted unchanged for 30 centuries by means of oral transmission from master to disciple., in an area which includes a population of 200 million inhabitants (now almost 900). Saussure states how Vedic poetry is literally full of anagrams, linguistic games and cryptograms with names. This characteristic allows for the "almost superhuman" absolute absence of different versions in the Veda, which Saussure defined as a sort of universal principal, without an author (whether divine or human) and inspired by the idea of the pre-existence of the word, of the sound, of the vocal figure which designs the objects, compared to the objects themselves.

According to Voloshinov, linguistics as an offspring of philology has assumed monological utterance as its basis of analyses, ignoring the social dimension, which he calls a *social utterance* (Voloshinov 1999: 202–203). According to Voloshinov and the Bahtin school where he belonged, the concept of "utterance" exceeds the notion of individual *parole* as opposed to *langue*. The dispute that Voloshinov held against Saussure, probably influenced by the theories of Marr, assumes an understandable vehemence in the context of the theoretical debate in the first few years of the 20th century in Europe, both in the linguistic field as well as more generally within that of human sciences. However, the contribution of the so-called "school of Bahtin" to overcoming the "abstract hypostatising objectivism" (Voloshinov 1999: 185) of a linguistic system designed as a group of invariable and indisputable standards lays the the foundation for a materialistic and dynamic vision of language intended as a social practice, whose main lines are indicated below.

Language is carried out in discourse and discourse is articulated in utterances, that is in operations of "starting to speak", of ideological "positioning" in it, by social subjects. The utterances in turn are realised by means of enunciated words, by means of complete verbal realisations which we may consider minimal communication units. Utterance

establishes the social dimension of language, considering the fact that it assumes at least one speaker and one listener in order to be realised. This means that a social relation consists of at least "two sides". The standard structures of utterance, whether they concern orality or writing as "relatively stable types" of utterance, constitute *discourse types*. Conversation, dialogue, monologue, reading, direct reply, indirect speech etc. are "simple" discourse types, or as Bahtin defines them, "primary" ones. Then, there are more complicated (or "secondary") discourse types, like literary genres (novels — detective, erotic, epistolary, etc.; poetry; epics; tragedy, and so on). The types of discourse are varied and can consist of as little as one word or be as long as a novel of several volumes. The primary types are a part of the daily reality and of immediate verbal communication, while the secondary types are a part of a more complex cultural communication, above all written.

Talking about utterances of daily life and types of discourse connected to this, let us consider Voloshinov's claim that the "form" of the dialogue represents the most natural form of language (Voloshinov 1999: 244–245). We talk about "form" of dialogue here and not of "type", in order to distinguish between a characteristic connected to the social dimension of language and a type of discourse which we commonly and explicitly manage to recognise as a dialogue. The dialogicity of which Voloshinov and Bahtin talk, is also present in what we usually define as "interior monologue", as well as in the diary or autobiographical "speaking to oneself", in which the discourse is always broken down into separate remarks, into questions and answers through which the multiplicity of "I's" who make up the so-called individual subjectivity is developed.

Voloshinov is highly critical of the sanctifying attitude in front of the authority of the word by others which he details in his own linguistics of abstract objectivism, and to oppose it, he proposes a pragmatic approach to the relationship between "one's own" words and words of the "others", or between one's own *discourse* and that of the others, to put it better. He uses two expressions derived from Wölfflin to define two styles of others' discourse transmission: *linear* style and *pictorial* style. Concerning the former, he writes: "its basic

tendency is to create clear external frameworks of others' discourse with a very weak internal determination" (Voloshinov 1999: 249). In the latter case, however, "language elaborates the ways for a more subtle and malleable inclusion of author's reply and comment in others' discourse" (Voloshinov 1999: 249).

A typical aspect of this latter direction is the development of "mixed variations" of others' discourse transmission. Apart from the more malleable variants of direct discourse, there are two other variants that are important and are analysed by Voloshinov through a comparison between different languages: indirect improper discourse and, above all, free indirect discourse which, "further weakens the confines of the others' utterance" (Voloshinov 1999: 251), and the significance of which has been noted by Ponzio (Ponzio 1999b: 39),

Social orientation of the utterance, its plurivocity — whether it be explicit, potential or understood — comes from the constitutional dialogicity of the word, from the fact that in any case the verbal sign does not only need to be identified, recognised, decoded, but above all it has to be understood in its response, as if the interpretation assumes the form of the reply to the phrase of a dialogue. The interpreter of responding comprehension (Ponzio, Calefato, Petrilli 1994) is what the utterance of daily life always calls for. Even when the mere level of the sign system and of identification would be sufficient to recognise the meaning of an utterance, social comprehension always concerns content and aspects of the discourse which transcend the sign system and identification, often concerning the implied part (verbal or extra-verbal) of the utterance.

Therefore, the utterance does not "reflect" the extraverbal situation as if it was simply transmitting a meaning produced before through language: in the annunciation the situation is interpreted and evaluated, it is in the annunciation that the meaning made up of both verbal and extraverbal material, and expressed both in signs and in values, is reproduced, circulates and enriches. Utterances produce contexts, in other words they produce effects of sense, feelings, values, behaviour, social roles, hierarchies, differences. Language is basically always action, praxis, relation.

6. Languages, language, communication

In a reconstruction of the history of the linguistic trends between the end of the 19th century and the first few decades of the 20th century, Roman Jakobson recalls the controversy on the Saussurean *Course* risen in his *Theses* of 1929 by the Prague linguistic circle of which he was a leading figure. Jakobson acknowledges as fundamental Saussure's intuitive understanding (derived from the stoic concept) that the sign has two facets, the perceptible *signans* and the intelligible *signatum* (Jakobson 1971: 717). The two Latin terms are used by Jakobson instead of the Saussurean *signifiant* and *signifié*: the same choice is also followed by Rossi-Landi, who underlines how these two terms of Augustinian origin are more correct both in order to overcome the "mentalistic ambiguity of the Saussurean *signifié*" (Rossi-Landi 1985: 151), and in respect to a dynamic and non-static function of semiosis. Every *signatum* may indeed become in turn the *signans* of something else, in a multilevelled and open semiosic process.

As regards the Saussurean notions of synchrony and diachrony, Jakobson blames the *Course* for remaining anchored to a "neogrammatical" concept of diachrony, although it had anticipated the new structural approach to the synchrony of language (Jakobson 1971: 721). The controversy of the "Prague circle" towards Saussure actually consisted in the greater attention that they paid to the fact that the diachronic transformations of language, starting with the phonological ones, exist in the functioning of the system. These considerations are emerge against the background of what Jakobson calls a "nomotetic" viewpoint of seeking laws within the framework of human sciences (Jakobson 1971: 656). As a result of this, no linguistic change can be understood or interpreted without referring to the system that undergoes it and to the function that the change has within the same system. At the same time, no language can be described fully and adequately without taking into account the changes that are in progress. In this perspective Jakobson writes:

> The diachronic linguistics of today examines the succession of dynamic synchronies, confronts them, and, in this way, delineates the evolution of a language in a wider historical perspective, with due attention not only to the mutability of the linguistic system but also to its immutable, static elements (Jakobson 1971: 721).

De Mauro, in the notes to the Italian translation of the *Cours*, underlines the fact that the Prague Circle controversy can be removed by considering how in Saussure the opposition between synchrony and diachrony is not in the "things" that the researcher is occupied with (in *matière*), but in the point of view, the *objet* of the linguistic analysis (De Mauro 1978: 427). Without prejudice towards these considerations, which have had a significant role in the history of 20th century linguistics, the point of view of critical socio-linguistic analysis founded on a semiotic basis should be put foward in this context. In particular, pointing out the relationship between synchrony and diachrony helps to acknowledge the modelling role played by the sign systems in the complex articulation between the instances of change, experimentation and mutability that they convey, and the internal resistances, "necessary" but often operating in an alienating manner, innate in social reproduction of which the sign systems themselves belong to.

It is, therefore, of particular importance today to read again some observations made by Jakobson both on the relationship between linguistics and sociolinguistics and between language and other communication systems. Jakobson includes linguistics within the framework of semiotics, intended as a general science of signs, in the same way as it was foreseen, nominated and delineated in Locke's *Essay Concerning Human Understanding*: "*semeiotiké* or the 'doctrine of signs', the most usual whereof being words" (Jakobson 1971: 657). The Lockian term of "semiotics" was maintained by Peirce, whereas Saussure proposed "semiology" to indicate the general science of signs considered in their relationship with language. According to Jakobson, both Locke and Saussure were right to consider language "the central and most important among all semiotic systems" (Jakobson 1971: 658). However, a comparison between language and other types of sign is of

vital importance for linguistics itself because it shows what properties are shared by the various sign systems and which ones are, on the other hand, specific to the verbal (Jakobson 1971: 658).

The sociolinguistic approach comes within this framework. Jakobson reminds how all the various questions advanced under the label of "sociolinguistics" require the same structural analysis common to all other linguistic perspectives (Jakobson 1971: 667). Following this framework, Jakobson lays the basis for what we could define a sociolinguistics that is at the same time functionalist, since it considers above all the functional varieties of language, and interpretative because it assumes that there is co-determination between linguistic behaviour and social facts (Berruto 1995: 29). Jakobson says that a linguistic community has at its disposal:

> more explicit and more elliptic patterns, with an orderly scale of transitions from a maximal explicitness to an extreme ellipsis, 2) a purposive alternation of more archaic and newfangled distinctions, 3) a patent difference between rules of ceremonial, formal and informal, slovenly speech (Jakobson 1971: 667).

On these bases, social rules are established in a community which allow, prescribe or prohibit the word or silence, in accordance with what could be defined as ceremonial rules under linguistic practice. Moreover, continues Jakobson, our linguistic performance is governed by a competence of monological or dialogical rules which are determined by social behaviour. For instance, verbal relations between the transmitter and the receiver build the grammatical categories of gender and person. In the same way, the role covered in language by the rules connected to the social role, to the sex, or age of the interlocutors, forms a linguistic "challenge" to the idea of a static and uniform language. The structuralist sociolinguistic approach says Jakobson, dispels the myth of uniform linguistic communities, highlights the role of centrifugal and centripetal forces on a territorial and social plane, opens in the speakers the awareness of variations, of distinctions and of changes in the verbal system, also opening the

metalinguistic consciousness which forms "a crucial intralinguistic factor" (Jakobson 1971: 668).

There follows an essential passage:

> Since verbal messages analyzed by linguists are linked with communication of nonverbal messages or with exchange of utilities and mates, the linguist research is to be supplemented by wider semiotic and anthropological investigation (Jakobson 1971: 669).

Linguistic analysis and social analysis therefore proceed in an integrated manner: the Jakobsonian references are above all to Trubetskoj, founder of structural phonology and an important member of the Prague circle, and to Benveniste, theorist of utterance; but also to Lévi-Strauss and to Rossi-Landi. Indeed, the "natural" job of the linguist, according to Jakobson, is that of bringing out the primordial significance of the concept of "communication" (Jakobson 1971: 663) for the social sciences. Jakobson reminds us how Trubetskoj had conceived the idea of the integrated sciences of communication back in 1926, Benveniste assumed the problem of discovering the common basis to language and to society and of comparing their fundamental units, Lévi-Strauss proposed an integrated science of communication including social anthropology, economy and linguistics (Jakobson 1971: 663), and Rossi-Landi, in the same period in which Jakobson wrote these texts on communication (1960's), considered goods as particular types of messages (Jakobson 1971: 665).

Basically, what comes from these Jakobsonian writings of the 1960's is the idea of a semiotic basis for the study of language as social communication. A particularly crucial insight in the perspective of the technological revolution, whose embryonic features began to develop in those years, is contained in the speech which Jakobson made in Milan in 1968 at the conference *Languages in Society and in Technique*, sponsored by Olivetti. Here he proposed a classification of signs according to the way in which they had been produced: either directly organic or instrumental (Jakobson 1971: 701). Amongst the visual signs for instance, gestures are directly produced by the bodily organs, while painting and sculpture imply the use of instruments. Amongst

the auditory signs, the word and vocal music belong to the first type, while instrumental music belongs to the second. Jakobson writes that even when the telephone or the radio reproduce the "organic voice", it always remains such. However (and here lies an interesting insight by Jakobson),

> the wider diffusion in space and time does not remain without influence upon the relation between the speaker and his audience and herewith upon the makeup of messages. (Jakobson 1971: 701)

The changes within the framework of what Jakobson called "new media" (now a common expression but very new at the time), produce significant effects, important for linguistic and sociological research, both in the context of production and perception of messages (Jakobson 1971: 702). Here Jakobson makes direct reference to the telephone and to the radio, as well as to cinema which has been transformed from a simple mechanism of reproduction of the image into an intricate and independent semiotic system (Jakobson 1971: 702). These considerations allow us to reflect in a manner which we now call "socio-semiotic" on the processes of transformation of the "organic" signs into signs of a new type, which cannot be simply defined as being "instrumental", but which articulate the relationship between organic and instrumental in a new and complex manner, expanding the confines of the organic and at the same time "naturalising" the instrumental element.

In the same text, Jakobson defines the difference between communication and information: in his opinion, whereas the former implies a recognisable transmitter, the source from which the latter is issued is not recognised as the transmitter by the message interpreter (Jakobson 1971: 703). In any case, this difference, whether it be shared or not, has many theoretical implications on what are today commonly described as sciences of communication, which often have to do with a semiotic model in which it is certainly impossible to recognise a transmitter as a primary source of messages — see, for example, the case of telecommunication networks. According to Jakobson, the study of language in relation to other communication

systems also takes into account the necessity of distinguishing between homogeneous messages, which use a single system of signs, and syncretic messages based on a combination of different sign systems (Jakobson 1971: 705). These combinations are found in different social forms, as anthropology has demonstrated by studying for instance societies where poetry has developed not as a spoken but a sung verse (Jakobson 1971: 705). Jakobson adds that "modern culture develops the most complex syncretic spectacles, such as musicals and in particular cinematic musicals, making joint use of several auditory and visual semiotic media" (Jakobson 1971: 705).

A characteristic of current cultures and societies is the widespread metalinguistic awareness (that consists of a crucial intralinguistic factor, to use Jakobson's expression) of the generalised presence of syncretic sign systems in which not necessarily the verbal language, or not only the verbal language plays a dominant role. This does not mean that "only today" communication is articulated in complex systems, quite the contrary. However, the fact that communication has pervaded all social reproduction constitutes, almost retroactively, the reason why metalinguistic consciousness lives in a world, an *Umwelt*, as Sebeok would say, in which several sign systems interact. In the following pages these concepts will be specified.

7. Society as the human Umwelt

As has been said, Italian "*linguaggio*" means a modelling device of the world: this device is something unique to human beings amongst the earth's living creatures, as both Sebeok and Ponzio have demonstrated (Sebeok 1990; Sebeok, Petrilli, Ponzio 2001). Of course, every living being, from the most biologically elementary, has a way of organising its "world", its surrounding environment, its *Umwelt*. One of these modes may be for instance the "territory" for most mammals. However, language only structures the human *Umwelt*, that world whose "limits" are actually, as Wittgenstein said, the limits of language, because it is language which simulates it, represents it, organises it.

Language as a modelling device comes before speaking and communicating, that is those eminently verbal activities which are articulated in languages, in discourses, in utterances. Language is the result of what Sebeok has called human *adaptation*, originating about two million years ago with *Homo sapiens*. Speaking is externalising and it is the outcome of this modelling system based on *syntax*, in other words on a sequential and regulated organisation of signs.

The infant, who, as we say, "learns to speak", possesses language even before being able to reproduce words and sentences: their crying and their rhythmical gestures, first, their goo-goos and their babbling, are all forms by means of which young human beings organise their bodily matter in space, in time, in relation to their needs and above all in relation to the others who are around them — first of all the mother or the father. The deaf and dumb and subjects who do not have listening or speaking capacity due to some physical handicap, still have language in the sense of the modelling system, on the basis of which it is possible for them to practice all internationally recognised forms of communication and articulate even in different linguistic areas.

However, it would not be correct to think that this modelling activity, which we have called "*linguaggio*" and which we have distinguished from speaking, is something "internal", a "content" of being human, one of its biological "faculties". Language is not a system included in human consciousness, because what we call "consciousness" *is* language itself, and is a historically and socially determined context even in its "natural" functions and components. If it is true that speaking is a consequence of language, it is also true that human communicative systems increase the functions and the techniques of language itself and improve the non-verbal ability of human beings enormously. Making a distinction between language and speaking is useful on a theoretical level in order to avoid improper simplification which defines language as an instrument for communicating, at the same time considering the communication according to the unidirectional and monological model of a passage of information from a transmitter to a receiver that understand one another as a result of a common semantic code. However, the distinction does not imply an

absolute separation: on the contrary, amongst the different terms — language and speaking, language and communication — there is a lively and always current interaction. Indeed, what is the specifically human *Umwelt* if it is not the social context, the human relation between individuals?

While animals *are* their modelling devices, human beings *objectify* their modelling devices, i.e. the language and its "syntax", and are capable of reproducing them and externalising them through speech and communication. Here, "objectification" means the anthropological category that indicates the historical and social forms in which human nature is expressed. Human linguistic activity, either as language-consciousness, or as "linear" organisation called speaking, is part of the social mechanism of objectification. In this sense, speaking intervenes retroactively on language, even managing to modify the forms and the structures, and thus showing the close relation that exists between our significant social practices and our consciousness.

If for the living creatures of our planet there are different *Umwelten*, that is different "worlds" surrounding each species, or better, that each species manages to perceive and structures in relation to its own nature, the human being is characterised by living above all in relation to others, in more or less rudimental forms of *society*. Human societies differ from all the assorted forms of animal aggregation because by using language humans are capable of objectifying the social context in the sense explained above, in other words they are capable of reproducing and planning, not only their natural conditions of life, but also and in a significant manner, their reciprocal relations. This does not mean, of course, that human beings are characterised by an "inborn" desire for survival and natural evolution, on the contrary: war, genocide, destruction of others' lives and of nature are part of those social plans which human beings are unfortunately capable of realising, as history recalls, even in the most alienated, criminal and "crazy" forms.

Language allows human relations to be objectified, since it is, in turn, implicated by these relations: indeed the conditions that have permitted homination are above all of a social order, that is they are

based on the human need to establish a relation with others. This relation, however, comes before what is usually called communication. "Relation with others" actually means first of all giving a form to a common feeling, a common meaning. It means learning, interacting with the other body, the expressions of signs which articulate this common signifying. It is, in effect, from a certain point of view, an activity which has to do with "communicating", in the etymological sense of "sharing" more than "transmitting" or "informing". Sharing a complex system of discontinuous features — the signs — which organise the matter and transforming it into society; that is in an articulated network of relations between human beings, and between human beings and "world".

Language, intended in this way, *is* society, in the sense that the first matter that language "transforms" and organises into signs is the relation with others, it is the social context. A fundamental part of this transformation is the relation of sex, on the basis of which *gender* is produced as a semiotic category, in which the man-woman difference is articulated socially and culturally.

As Rossi-Landi writes, "society is the aspect assumed by matter on a human level" (Rossi-Landi 1985: 32). Linguistic matter is a system in which social values take shape: in this sense it should not be separated from the model through which we look at the production processes of these values, that is through which we look at the *formation* of matter itself. It is closely and constantly connected to the model and to the project which organises this complexity, to that dimension of the language which makes it a simulating apparatus of the matter itself, although this dimension can never be considered exhaustive and gratifying.

"Language" as a modelling device is applied to materials made up of different types of signs. For instance we can talk about the language of dance, articulated in movements and positions of the body in space; about the language of music, articulated in rhythm; about language of dreams, of photography, of cinema, of the way of dressing, of cooking. In order to create a culinary "dish" for instance, we must select the ingredients, manipulate them by following a recipe, that is a "narrative

plan" organised in sequences, appraise one or another according to the situation, mix the flavours so that, at the moment of eating they are also capable of "telling" the procedure which has led to the creation of the dish itself. And even clothes, our mantle, the objects with which we cover ourselves, the signs that influence us or which decorate us are forms through which our bodies enter in relation with the world and between one another. Dressing in any society and culture is, therefore, a type of design, of simulation of the world, valid for society and for the individual, which is made in signs and objects through which the body is situated in time and in space in its surrounding environment. What articulates the way of dressing is a sort of socio-cultural syntax that we shall call "customs" within the ritual functions of clothes and of traditional societies, "fashion" in the context of the aesthetic functions of clothing and the culture of modernity. Despite being in different historical, social and geographical situations, human beings have always had a very particular relationship with the clothes, with the objects that they wear and with the "artificial" signs of the body, based on the conviction that internal relations between these elements and between this and the body are regulated by a judicious logic, whether it be collective or idiosyncratic. Claude Lévi-Strauss (1962) made an exemplary description of this phenomenon, through the anthropological study of what he has called "patchwork", that is the "savage" art of connecting objects apparently without common connections, but whose "collection" is, however, presented from the point of view of the subject who realises it, as an organised and homologous system compared to the "world", as a language, as a "piece" of society materialised in objects, styles, rites, ways of appearing corporeal.

A dish or some clothes, however, if they are "above all" signs in which the respective languages are articulated are also different from signs, they are "extra-sign residues" or "bodies", as Rossi-Landi calls them (Rossi-Landi 1985: 137–166). Of a certain food we eat the "body", apart from the sign, that is apart from what we have called "dish". We cover ourselves with heavy clothes or with a pair of socks because they keep us warm, as well as for cultural, social, geographical and fashion

reasons. Basically, with non-verbal systems, or those made up of both verbal and non-verbal matter, there is also a non-sign dimension apart from the sign dimension that lets them be defined as "languages".

Verbal language is, however, entirely made up of sign material, articulated on a phonological, morphological, syntactical, semantic and pragmatic level. This explains why we use the term "*linguaggio*" — which, however, conceals a privileging of the aspect of the verbal — to indicate modelling procedures which can also be exerted on non-verbal material: indeed the word "*linguaggio*" shows how much these procedures are manifested in the verbal better than in other fields. At the same time, the verbal method allows us to consider how societies that have privileged other modelling systems can exist, as the other modelling systems (for instance, clothing, music, gifts) are in any case homologous to what the linguistic verbal system represents for societies and cultures which basically articulate the production and reproduction of meaning through verbal matter.

8. Communication-production

The sign dimension of the social has characterised the history of cultures and civilisations: to support this just think of the totally sign nature of natural languages and thus of the socio-linguistic categories under them, or of the symbolic function of non-verbal sign systems like food and clothing. Sign systems show their operating mechanisms like motors of relations between individuals, like modelling devices of the world, like principles of meanings and of values. In this sense the sign systems can be defined as communication systems. In his *Scheme of social reproduction* (Rossi-Landi 1985: 27–45), Rossi-Landi defines communication as social reproduction, that means as the whole situation of production-exchange-consumption of goods and of messages, which he considers all signs in his "homology model". It is not only the moment of exchange — which would appear to be the most naturally exposed to this — that assumes the communicative dimension (which is expressed for instance in aspects like advertising

persuasion techniques, marketing strategies, etc.), but also the other two, production and consumption. This becomes evident above all in the present time, whatever it may be called: "post-industrial", "post-Fordist" etc. Indeed, the manifestations of sign production-communication range from the telecommunications, IT, cinema, remote work industries to processes of automation and training; consumption as communication includes elements like the consumption of telephone, electricity, IT, television, "satellite", etc. and should also be considered in the light of its so-called "fluidation", that is its mobility, flexibility, hybridation.

Production, exchange and consumption are currently three moments which are now almost completely intersecting one another. Their structural similarity, which establishes a homology inside social reproduction itself, is already hidden in Rossi-Landi's reflections, particularly on the level that Rossi-Landi calls "global production" (Rossi-Landi 1985: 82–84). This concerns the fact that a given explicit artefact, whether it be verbal or non-verbal, "tells" so as to say, shows the productive totality that generated it, for instance a language, a material culture, mankind as a whole. Many signs-goods of our present explicate globalised social reproduction from which they were produced, within which they exchange and consume themselves: from jeans, to Coca-Cola, to IT writing to credit cards. The main sociosemiotic feature of these signs-goods is that of containing in themselves a communicative value, to be communication alone, both as sign-goods produced and in sign-goods exchanged and consumed.

The blend of goods and signs, proposed since the 1960's by Rossi-Landi, means that the value of goods is above all considered as a social relation. This relation now implies that the value of an object consists not so much of its functionality — of its value of use — and not even of its exchange value intended in the traditional sense. In the current period which can be defined as the period of total communication, the value can be intended as being the communicative value whose measure is above all based on innovation and speed.

The concept of innovation is much less hazardous than what we might think: indeed it concerns the generalised sign quality of social

reproduction, as various recent projects have shown, amongst which we can point out here the *Green paper on innovation* of the European Commission. A creative process, a service, a research, a development programme, an object, can be called "innovative" firstly from a communicative perspective, since innovation must be socially represented as such, it must be based on social discourses which circulate and which are reproduced both inside restricted groups (for instance a company, a public commission, a government), and within extended communities on mass levels. In this sense the truthfulness of the social discourse which supports innovation, depends on the capacity that this discourse has for circulating "as if" it were true, to respond to expectations and removed meanings, to construct styles of life, to interact with other discourses.

Moreover, paradoxically and paraphrasing an expression of Benjamin (1995), regarding innovation, we can talk about its semiotic destructive character, that is about the fact that the impossibility to use a means of production or a consumption good concerns its wear as a sign and not as a "body" (Rossi-Landi 1985: 137–166). Indeed "scrapping" the old and replacing it with the "latest innovation" occurs in every phase of social reproduction as a result of communicative techniques which, to the detriment of the so-called "old", exploit totally sign elements, like modularity, speed, design, "virtualisation", personalisation. Boundless examples with direct reference to the present can be made to support this: from the philosophy itself that regulates the idea of software; to the role of design in the car industry, of hi-fi and household electrical items, to the concepts of time, space and body connected to the mass diffusion of mobile phones; to consumption on the Web.

8. Open sociosemiotics

It has been previously demonstrated how language is an intrinsically social factor, it is society *tout court*: an important consequence of this arrangement is that, however and wherever sociolinguistics as a

science of language may direct its research, it cannot help taking into consideration fundamentally the manner, the procedure, the forms through which the social relations are modelled and take shape in language. Differences, roles, hierarchies, are some of the forms that social relations assume when they are modelled by language.

The key concepts of "official" sociolinguistics until now, like for instance "variability" and "linguistic variation", "communicative situation", "linguistic community", cannot therefore refer only to language as a "downstream" product of the linguistic production process, but should basically be put in relation with the whole meaning generating procedure called "language". When linguistic systems, like for instance a natural language are considered "products", then it will be important to point out how much these systems manage to "say" about their production and generation processes, and of their operation as motors of social relations. For instance, if a natural language is to be examined from the point of view of sexual difference, the "empirical" analysis of the texts, of grammatical and syntactical structures, of lexemes, must be supported by theoretical analysis of the procedures of social discourse through which those constructs have been produced and forms by means of which they model the order of the social discourse itself.

The concept of "plurilinguism" is central in this vision, inasmuch as it is intended not principally as plurilinguism of "*lingue*" (in the line that has until now inspired the analysis of bilinguism, of diglossia, of sectorial languages, of dialects, of registers, etc., as "flagship" areas of socio-linguistics), but as pluriliguism of "*linguaggi*", of types of discourse (pluridiscoursiveness), of voices (polyphony), which acts as a condition of possibility in all the manifestations of *lingua*, including those indicated above.

However, there is another important element to underline. If language is considered to include verbal and non verbal material, the meaning production processes are to be considered in different areas, which can indeed see verbal language as that in which social relations are defined in a more macroscopic and significant manner, but which must also consider the field of non-verbal languages. In this sense,

socio-linguistics is intended as being socio-semiotics, without prejudice to the fact that the reference area must be *human*, since semiotics also has the prerogative of referring to the world of non-human vital signs.

The fact that socio-linguistics as an independent science of language was also created as a reasonably explicit echo of those political, cultural and social movements that had the merit of introducing a radical cultural relativism around the 1960's, certifies its occasionally critical function of all the supposed universalisms. This component of opening and stabilising in social practice also makes socio-linguistics in the sense of socio-semiotics a "frontier" science, in the dual sense that it is not only on the border between science of language and the anthropological and social sciences, but also that it can be constructed in a movement of continual "crossing frontiers" and of "contamination" between *languages* and disciplinary environments.[8]

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Язык в процессе социальной репродукции: социолингвистика и социосемиотика

В статье рассматриваются семиотические основы социолингвистики. Начиная с определения термина «социолингвистика» философом Адамом Шаффом, статья сосредоточивается на понятии «критической социолингвистики» итальянского семиотика Росси-Ланди. Основа социального измерения языка кроется, по мнению Росси-Ланди, в феномене «социального воспроизводства», которое охватывает как вербальные, так и невербальные знаки. Судя по соссюровскому «Курсу общей лингвистики» и по его гарвардским рукописям, его термин *langue* можно рассматривать именно в таком контексте.

Далее в статье предпринимается попытка разъяснить провокативное определение Роланом Бартом «семиологии» как части лингвистики (а не наоборот!) и развить с этой точки зрения понятие производства коммуникации. Статьи Романа Якобсона 1960-х гг. позволяют нам рассматривать в социосемиотическом (как это сейчас называется) ключе превращение знаков «органического» типа в знаки нового типа, в которых соотносятся органическое и инструментальное. Исходя из этого, цель социолингвистики — быть прежде всего социосемиотикой, т.к. семиотика не ограничивает себя рассмотрением исключительно человеческих знаков.

Социолингвистика в качестве социосемиотики берет на себя роль «пограничной науки» в двух смыслах: как по той причине, что она служит границей между наукой о языке и гуманитарными и социаль-

ными науками, так и по той, что она конструируется в ходе постоянного «перехода границ» и «смешения» между «языками» и дисциплинами.

Keel sotsiaalses taastootmises: sotsiolingvistika ja sotsiosemiootika

Käesolev artikkel räägib sotsioligvistika semiootilistest alustest. Artikkel alustab termini "sotsiolingvistika" määratlusest filosoof Adam Schaffi poolt ja keskendub itaalia semiootiku Rossi-Landi "kriitilise sotsiolingvistika" mõistele. Keele sotsiaalse dimensiooni alus peitub Rossi-Landi poolt "sotsiaalseks taastootmiseks" nimetatud fenomenis, mis hõlmab nii verbaalseid kui mitteverbaalseid märke. Saussure'i *Cours de linguistique générale*, aga ka tema Harvardi käsikirjade põhjal otsustades võib ta terminit *langue* just selles võtmes mõista.

Edasi üritatakse artiklis mõtestada Roland Barthes'i poolt üsna provokatiivselt defineeritud "semioloogiat" kui osa keeleteadusest (ja mitte vastupidi!) ning arendada sellest vaatepunktist lähtudes kommunikatsioonitootmise mõistet. Roman Jakobsoni 1960ndatest pärit artiklid võimaldavad meil sotsiosemiootiliselt (nagu seda praegu nimetatakse) käsitleda "orgaaniliste" märkide muundumist uut tüüpi märkideks, milles suhestuvad orgaaniline ja instrumentaalne. Sellest vaimust kantuna oleks sotsiolingvistika eesmärk olla ennekõike sotsiosemiootika, ilma et eeldataks kitsalt vaid inimestega tegelemist, kuivõrd semiootika privileegiks on see, et tegeletakse ka mitte-inimlike märkidega.

Sotsiosemiootiline lingvistika võtab endale "piirteaduse" rolli kahes mõttes: ühelt poolt kui piir täppisteaduste keele ja humanitaar- ning sotsiaalteaduste vahel, aga teiselt poolt moodustub sotsiolingvistika pideva "piiride ületamise" ja *keelte* ning teadusvaldkondade vahelise vastastikuse "segunemise" kaudu.

Sign Systems Studies 37(1/2), 2009

On the ontology of fictional characters: A semiotic approach

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Abstract. Why are we deeply moved by the misfortune of Anna Karenina if we are fully aware that she is simply a fictional character who does not exist in our world? But what does it mean that fictional characters do not exist? The present article is concerned with the ontology of fictional characters. The author concludes that successful fictional characters become paramount examples of the 'real' human condition because they live in an incomplete world what we have cognitive access to but cannot influence in any way and where no deeds can be undone. Unlike all the other semiotic objects, which are culturally subject to revisions, and perhaps only similar to mathematical entities, the fictual characters will never change and will remain the actors of what they did once and forever

In 1860, on the verge of sailing through the Mediterranean to follow Garibaldi's expedition to Sicily, Alexandre Dumas stopped in Marseille and wanted to visit the Chateau d'If where his hero Edmond Dantès, before becoming the Count of Montecristo, spent fourteen years of his life, and was visited and rescued in his cell by the Abbot Faria. During his visit Dumas discovered that the visitors were shown the "real" cell of Montecristo, and the guides were speaking of him, Faria and other characters of the novel as if they had really existed. On the contrary, the same guides ignored the fact that a historical figure like Mirabeau had been imprisoned at the Chateau d'If.

Thus Dumas comments in his *Memoirs*: "It is the privilege of novelists to create characters who kill those of the historians. The reason

is that historians only evoke mere ghosts, while novelists create persons in flesh and bones".

Once a friend of mine urged me to organize a symposium on the following subject: why — since we know that Anna Karenina is a fictional character who does not exist in our real world — do we weep for her deeds (or in any case, we are deeply moved by her misfortunes)?

Probably many sophisticated readers will not cry on the fate of Scarlett O'Hara but they, too, are certainly shocked by the fate of Anna Karenina.

I resolutely told my friend that this phenomenon had neither ontological nor logical relevance, and could only interest psychologists. Moreover, we certainly can identify ourselves with the cases of fictional characters, but this does not occur only in reading fiction. Many of us have sometimes thought of the possible death of a beloved person, and felt touched, if not moved to tears, even though they knew for sure that the imagined event had not taken place.

Later, I had to admit that there is a difference between weeping for the imagined death of our beloved and weeping for the death of Anna Karenina. In the first case, when after the daydream we are asked if our beloved has really passed away, we say that it was not true — as it happens when we suddenly awake from a nightmare and we realize with relief that it was only a hallucination. On the contrary, if we were asked if Anna Karenina died we would always answer positively, as if the fact that Anna committed suicide were true in every possible world.

Moreover, some people are pulled to suicide when abandoned by their beloved, but I have never heard of somebody who committed suicide because one of his friends had been abandoned by his fiancé. Thus it seems strange that, when reading that Goethe's Werther killed himself because of his ill-fated love, many romantic youngsters did the same, by the so-called *Werther effect*.

It seems funny that we deeply share the sorrow of somebody else only or mainly when we know that he or she never existed. But what does it mean that fictional characters do not have some kind of existence? According to Meinong, every representation or judgment

has necessarily an object, even though this object is not necessarily an existing one. Centuries before Meinong, Avicenna said that existence was only an accidental property of an essence or substance (*accidens adveniens quidditati*). In this sense there can be abstract objects (like the number 17 of the right angle, which do not properly exist but *subsist*) and concrete objects like myself and Anna Karenina, with the difference that I am a Physically Existing Object while Anna is not.

Now, today I am not concerned with the ontology of fictional characters.

Since the core of my reflections today is why people feel moved by fictional characters, I am obliged to consider Anna Karenina as a mind dependent object, or the object of cognition. In other terms, my approach is not an ontological but a semiotic one. My concern is not in which sense the assertion *Anna Karenina committed suicide* is true but rather why a normal reader can accept the assertion *Anna Karenina committed suicide* as true even when he or she knows that Anna is a narrative figment?

By definition fictional texts clearly speak of non-existing persons and events and from the point of view of truth conditional semantics, a fictional assertion should always tell what is not real-life.

In spite of that we do not take fictional assertions as lies. First of all, in reading a piece of fiction we subscribe a silent agreement with its author, who *pretends* that something is true and asks us to *pretend* to take it seriously. Secondly, we know that every fiction designs a possible world and all our judgements of truth and falsehood must concern that possible world. In this way it is true in the Conan Doyle's world that Sherlock Holmes lived on Baker Street and false that he lived in Tartu and we can bet our life in this point.

Fictional *versus* historical assertions

Is a fictional assertion like *Anna Karenina commits suicide by throwing herself in the path of a train* as true as the historical assertion *Adolf Hitler committed suicide (and his corpse was burned) in a bunker in*

Berlin? Our instinctive reaction would be that the assertion about Anna refers to an invention while the one about Hitler concerns what was really the case.

Thus, to be correct in terms of truth conditional semantics, we should say that *it is true that Anna Karenina commits suicide by throwing herself in the path of a train* is only another way for saying *it is true in this world that in a Tolstoj's novel it is written that Anna Karenina commits suicide by throwing herself in the path of a train.*

If so, in logical terms the truth about Anna would be true *de dicto* and not *de re*, and from a semiotic point of view it would concern the *plane of expression* and not the *plane of content* (or, in Saussure's terms, the level of the *signifier* and not that of the *signified*).

We can make true statements about fictional characters because what happens to them is recorded in a text, and a text is like a musical score. It is true that *Anna Karenina commits suicide by throwing herself in the path of a train* in the same way in which it is true that Beethoven's *Fifth Symphony* is in C minor (and not in F major like his *Sixth*) and begins with "G, G, G, E flat".

However, such a position is not completely satisfying from the point of view of the experience of a reader. By disregarding a lot of problems concerning the reading of a score as a complex process of interpretation, let us say that a musical score is a semiotic device which tells one how to produce a given sequence of sounds, and only after the transformation of a series of written signs into sounds the listeners can say that they are enjoying the *Fifth Symphony* (and this happens even to a very skilled musician, able to read the score silently, but in fact reproducing the sounds in his mind). When we say that *it is true in this world that in a Tolstoj's novel it is written that Anna Karenina commits suicide by throwing herself in the path of a train* we simply say that it is true in this world that on a given printed page there is a sequence of written words by pronouncing which (even though only mentally) the reader will afterwards realize that there should be a narrative world where persons like Anna and Vronskij exist.

But when speaking of Anna Karenina or Vronskij, we usually do not consider any longer the page where we read about their vicissitudes but rather speak of them in the same way as if they were "persons".

Do not forget that our problem is why we can be emotionally moved by the deeds of fictional characters. In spite of every logician nobody is supposed to weep because *Tolstoj wrote that Anna Karenina died*. This is none of our business. One feels moved, at most, because *Anna Karenina died* — even if one ignores that it was Tolstoj who first wrote it.

Nobody can reasonably deny that Hitler and Anna Karenina are two different kinds of entity, with a different ontological status. Hitler existed physically and Anna did not. In spite of this we can say that not only fictional assertions but also the historical ones are *de dicto*: the students who write that Hitler died in a bunker in Berlin simply state that this is true according to their history textbook. In other words, except for judgments depending on my direct experience (of the kind *it's raining*), all the judgments I can make on the grounds of my cultural experience (that is, all those concerning the information recorded in an encyclopaedia) are based on textual information and, even though they seem to express *de facto* truths, they are merely *de dicto*.

Encyclopaedic assertions are, however, still open to revisions. If we keep a scientific mind, we must be ready to revise our opinions about Hitler's death whenever new documents will be discovered. Moreover, the fact that Hitler died in a bunker has already been questioned by some historians. On the contrary, the assertion *Anna Karenina commits suicide* cannot be cast in doubt.

Fluctuating individuals in fluctuating scores

Notice that what I have just said holds true for Anna Karenina, Hamlet and many others but not for every fictional character. There are a lot of interesting narrative characters who have remained

unknown to the great majority of readers and stand so to speak prisoner of their original score. On the other hand, I have recently read that according to a reliable test, many Britons believe that Sherlock Holmes and Eleanor Rigby really existed.

Hamlet or Sherlock Holmes acquired a sort of existence independent of their original scores. Many fictional characters "live" outside the score which has given them existence, and move to a zone of the universe which we find very difficult to delimit. Some of them even migrate from text to text because the collective imagination has, over the course of the centuries, made emotional investments in them and has transformed them into *fluctuating* individuals.

It is not indispensable that they come from great works of art or from popular legends. In this sense we have appointed Hamlet and Robin Hood, Heathcliff and Milady, Leopold Bloom and Mickey Mouse as fluctuating entities. Becoming a fluctuating entity does not depend on the aesthetic qualities of the original score. Why so many people suffer for the suicide of Anna Karenina and only a small bunch of Hugo's addicts sympathize with the suicide of Cimourdain in *Ninety Three*? Personally I feel the fate of Cimourdain (a gigantic hero) more touching than the one of that poor lady. Too bad, the majority is against me.

On the contrary, Dido or Medea, Don Quijote, Madame Bovary, Holden Caulfield, Gatsby, Philip Marlowe, Maigret or Hercule Poirot became individuals living outside their original scores, and even those who have never read these original texts can claim to make true statements about them.

Being independent of the text and of the possible world where they were born, they are (so to speak) *circulating among us*, and we encounter some difficulties in not considering them real persons.

Let us define the epistemological status of these entities better.

A fluctuating character exhibits a *core* of properties that seem to be identified by everybody: for instance Little Red Riding Hood is a girl, she wears a red cap, she met a wolf who later devoured her and her grandmother, even though different people can have different ideas

about the age of the girl, the kind of food she had in her basket, and so on.

It has been suggested that a fictional character is an object of higher order, that is, one of these objects that are something more than the sum of their properties. What is crucial for the recognition of the object is that it maintains a *Gestalt*, a constant relation between its elements even if these elements are no longer the same. A typical example of higher order object is a melody. Chopin's *Piano Sonata No.2 in B flat minor op.*35 will remain melodically recognizable even if played with a mandolin. From an aesthetic point of view the result would be disastrous, but the melodic pattern would be preserved — and it would be recognizable also if some notes would be dropped.

It would be interesting to decide which notes can be dropped without destroying the musical *Gestalt* and which ones are on the contrary essential or *diagnostic* in order to identify that melody as such. It is not a theoretical problem, it is rather a task for a musical critic, and it will have different solutions according to the object of analysis. However, this reflection is important because the same problem exists when we are dealing with a fictional character. There are two versions of Little Red Riding Hood's story, the Perrault's and the Grimms' one, and in the former the girl is not rescued by the hunters and dies devoured by the wolf. Curiously enough, she remains the same individual in both versions, while (I suspect) nobody would recognize her if she appeared as a young lady, dressed like a princess, without the red cap.

Would Madame Bovary still be Madame Bovary if she did not commit suicide? There is a short story by Woody Allen called *The Kugelmass Episode* (published in *Side Effects*) where Madame Bovary is brought by a sort of time-machine to have a love affair in today's New York. Emma Bovary appears as a parody of the original character, she wears contemporary dresses and behaves as a Tiffany-goer, but she is still recognizable because she keeps most of her basic properties — namely, she is a petty bourgeois and the wife of a doctor, she lives usually at Yonville, she is unsatisfied with her countryside life, she is inclined to adultery. In Allen's story the suicide is not mentioned; but

it is essential for the ironic quality of the narration that Emma be fascinating (and desirable) just because she was on the verge of committing suicide — and Kugelmass is obliged to science-fictionally enter Flaubert's world *before* Emma had her last adulterous relation, just in order not arrive too late.

We can thus assume that a fictional character remains the same even if it is set in a different context, provided *diagnostic* properties (to be defined for each case) are preserved.

Fictional characters as semiotic objects

At this point, I cannot escape the basic ontological question: which kind of entities are fictional characters and in which way they, if do not exist, at least *subsist*?

Being a set of properties, a fictional character is a *semiotic object*. I define so every device by which an expression conveys a set of properties as its content — provided one assumes that every expression (a word, an image or some other device) is, as Searle has suggested, a peg for hanging descriptions, or properties.

From my point of view, these "pegs" are not only proper names but all expressions which convey as their proper content whatever we are used to call the meaning or the signified of the expression: the idea of an animal, of a place, of a thing, of a feeling, of an action, of a natural law like universal gravitation, of a mathematical entity, *et cetera*. Thus the expression *dog* conveys as its content the properties of being an animal, a mammal, a canid, a barking creature, the man's best friend and many others registered by a comprehensive encyclopaedia. These properties can at their turn be *interpreted* by other expressions and the series of these interrelated interpretations constitutes the whole of the notions shared by a community, socially and collectively recorded.

There are many kinds of semiotic object, some of them representing Physically Existing Objects or classes of Physically Existing Objects (like the ones conveyed by such terms as *horse* or *flower*, and

more or less corresponding to the classical *universals* like the Platonic "horseness"), others representing abstract notions or ideal objects (like *freedom* and *justice* or *square roots*), others that have been labelled as *social objects*, among which belong marriages, money, diplomas, and in general all entities whose nature is a law established by a collective agreement. But there are also semiotic objects representing human (or humanized) individuals. I do not share the theory of Kripke's rigid designation and I believe that the proper name 'Napoleon' conveys the properties of being born in Ajaccio, to have been a French general, to have become an emperor, to have won at Austerlitz, to have died at Saint Helena on May 5, 1821, and so on. The same holds for the proper name 'Barack Obama'. Among the bearers of proper names, the great majority has the property of having existed physically in some spatio-temporal location. Notwithstanding there are proper names conveying the properties of individuals characterized by the feature of being fictive (and as such they are usually registered by a good encyclopaedia).

The existence of fictional characters obliges semiotics to revise some of its approaches that risk looking excessively simplified. The classical semantic triangle usually appears this way (Fig. 1):

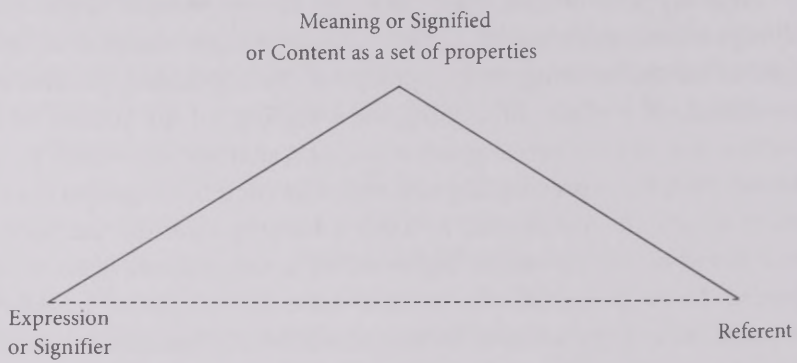

Figure 1. The classical representation of the semantic triangle.

An expression along with its content is a semiotic object. The referent is inserted in this triangle owing to the fact that we frequently use expressions in order to indicate something physically existing in our world. This happens when we speak of my friend John, of Milan or of Tartu, of that microphone on that table, of the fact that outside it's raining.

I do not believe that we are performing an act of reference when we say that dogs are animals or that all cats are nice: in these cases we are still making judgements about a given semiotic object (a class) predicating some of its properties. In other terms, a scientist can claim to have discovered a new property of apples, and in asserting that she is still pronouncing a semiotic judgement; whereas she implements an act of reference only when she says or writes in her protocols that she tested those properties of apples (in general) on the real individual apples A, B, C (then indicating the series of real objects she used to perform her experiments to legitimate her induction).

We perform acts of reference when we speak of individuals but there is a difference between referring to existing individuals and mentioning individuals who existed in the past. In the content of the expression 'Napoleon' the property of being dead on May 5, 1821, should be registered among his properties. On the contrary, the properties of the content of the expression 'Obama', must include being alive and the president of the U.S.

When referring to still living individuals the semantic triangle could be the following (Fig. 2):

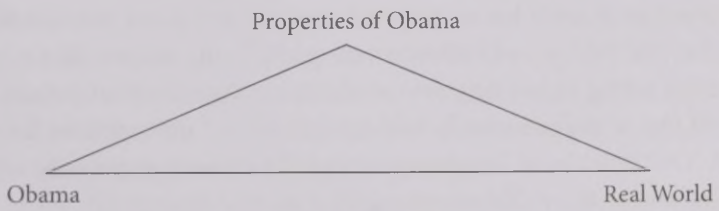

Figure 2. The semantic triangle when referring to a living individual called Obama.

In this case speakers who utter *p* referring to Obama, invite their addressees to verify *p* (if they want) in a precise spatio-temporal location of the physically existing world. On the contrary, who utters *p* referring to Napoleon is not inviting people to verify *p* in a past world. Unless one has a time-machine, one cannot go back in the past to check if Napoleon really won at Austerlitz. Any assertion about Napoleon either says which are the properties conveyed by the expression 'Napoleon', or concerns and refers to a newly found document that changes what we believed until now, let's say, about the death of Napoleon — for instance, that he did not die on May 5th but on May 6th. Only when the scientific community has verified that the document under question is a Physically Existing Object, we can proceed to the correction of the encyclopaedia, that is, of the properties attributed to Napoleon as a semiotic object.

It can happen that Napoleon becomes the main character of a biographical reconstruction (not to speak of a historical novel) that tries to make him live again in his time, reconstructing his actions and even his feelings. In this case, Napoleon becomes very similar to a fictional character. We know that he really existed but in order to take part in his life we try to imagine his past world as it were a possible world of a novel.

What really happens with fictional characters? It is true that some of them are introduced as somebody who lived *once upon a time* (like Little Red Riding Hood and Anna Karenina), but we have ascertained that by virtue of a narrative agreement the reader is bound to take for true what is narrated and to pretend to live in the possible world of the narration as it were his or her real one. At this point it is irrelevant whether the story speaks about an allegedly living person (like a given detective acting in Los Angeles) or about an allegedly dead person. It is like *in this world* somebody told us that one of our relatives has just dead. Our emotional involvement would be about somebody who is still present in the world of our experience.

Thus the possible semantic triangle should assume this new form (Fig. 3).

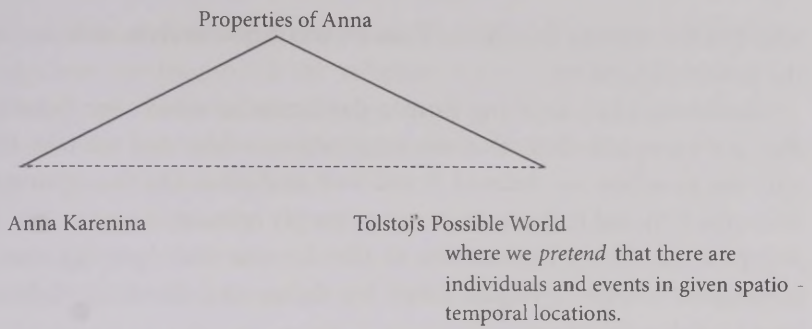

Figure 3. Semantic triangle in case of fictional characters.

When speaking of Anna Karenina, one makes a virtual reference to the inhabitants of a possible fictional world as if they were real persons. When we are shocked by a daydream where our beloved dies, at the end of our reverie we come back to our everyday life and we recognize that we had no real reasons to worry.

To be permanently sentimentally involved with the inhabitants of a fictional possible world we must then satisfy two requirements: (i) we must live in the fictional possible world as in an uninterrupted daydream; and (ii) we must in some way behave as if we were one of its characters.

It can thus happen that, when we enter a very absorbing and captivating possible narrative world, a textual strategy can provoke something similar to a mystic raptus or to a hallucination, and we simply *forget* that we entered an only *possible* world. It happens especially when we meet a character in its original score or in a new enticing context. But since these characters are fluctuating and, so to speak, they come and go in our mind, like the women in the James Prufrock's world, talking of Michelangelo, they are always ready to mesmerize us, and to make us believe that they are among us.

As for the second requirement, once we live in a possible world as if it was the real one, we can be disturbed by the fact that in that world we are not, so to speak, formally registered (in that world we do not exist) and we are drawn to assume the personality of somebody else

who has the right to live there. Thus we identify ourselves with one of the fictional characters.

However, when awaking from a daydream in which our beloved dies, we recognize that what we imagined was false and we take for true the assertion *my beloved is still well and alive*. On the contrary, when the fictional hallucination stops (simply because *le vent se lève, il faut tenter de vivre*), we continue to take for true that Anna Karenina committed suicide, Oedipus killed his father and Sherlock Holmes lives on Baker Street.

It happens that, being fluctuating entities, these faithful companions of our life have an additional virtue: unlike all the other semiotic objects, which are culturally subject to revisions, and perhaps only similar to mathematical entities, they will never change and will remain the actors of what they did once and forever — and it is because of the incorrigibility of their deeds that we can dare to say that it is true that they were or did this and that.

On other semiotic objects

Is there anybody else who shares the same fate? Yes, there are the heroes and divinities of every mythology and many other legendary beings like unicorns, dwarves, fairies and Santa Claus, as well as 99% of the entities in various religions. It is obvious that for an atheist *every* religious entity is a fictional one, while for a believer there is somewhere a spiritual world of *supernatural objects* (like gods, angels and so on), inaccessible to our senses but absolutely "real" (and in this sense an atheist and a believer rely on two different ontologies). However, if Roman Catholics recognize a personal God as really existent and assume that from Him and from His Son proceeds the Holy Ghost, then they must consider Allah, Shiva or the Great Spirit of the Prairies as mere fictions — designed by a sacred *narration*. Likewise, for a Buddhist the God of the Bible is a mere fictional individual and Gitchi Manitou is an equally fictional individual for a

Muslim as well as for a Christian. This means that for a believer in whatever confession all the religious entities of the other religions (that is, an overwhelming majority of entities) are fictional individuals — so that we are entitled to consider more or less ninety per cent of religious entities as fiction.

One could object that, at least for the believers in religion X, their divinity really exists, while for *all* the fans of Alice she is a non-Physically Existing Object. But if we were going to test the true beliefs of common people we would discover that many Christians are not sure that Jesus really resurrected; others go to the Mass but are very doubtful about the real existence of the Holy Ghost; others sincerely believe in God but think that Jesus was only a very virtuous human being; and finally many Catholics still consider certain saints as persons who really existed while the Roman Church has officially declared that they were a legend. Conversely, we have seen that some Britons believe that Holmes was a real person and many Christian poets started their works by invoking the Muses or Apollo — and we do not exactly understand if they simply used a literary *topos* or were in some way taking the divinities of the Olympus seriously. Many mythological characters have become protagonists of narrations, and in a symmetrical way many protagonists of secular narrations have become very similar to the characters of mythological tales, so that mythical heroes and gods, literary characters and religious entities are frequently separated by imprecise borderlines.

The ethical power of fictional characters

We have said that unlike all the other semiotic objects, which are culturally subject to revisions, and perhaps only similar to mathematical entities, fictional characters will never change and will remain the actors of what they did once and forever — and it is because of the incorrigibility of their deeds that we can dare to say that it is true that they were or did this and that.

That is why they are important for us, even from a moral point of view.

Just think — we are watching *Oedipus Rex* and we feel sorry that this fellow did not take any other road instead of the one where he met and murdered his father, and wonder why he reached Tebes and not, let us say, Athens, where he could have married Phryne or Aspasia? We read *Hamlet* asking why such a nice boy could not marry Ophelia and live with her happily, having killed that scoundrel of his uncle and gently kicked his mother out of Danmark? Why Heathcliff did not tolerate his humiliations a little more, waiting until he could marry Catherine and live with her as a respected country gentleman? Why prince Andrej could not recover from his mortal illness and marry Natasha? Why Raskolnikov had the morbid idea of killing an old lady instead of finishing his studies and becoming a respected professional? Why, when Gregor Samsa was transformed into a horrible bug, a beautiful princess did not arrive, kissing him and transforming him into the most handsome young man in Prague? Why on the arid hills of Spain Robert Jordan could not beat those fascist pigs and join again his sweet Maria?

Now, in principle it is enough to buy a computer program for rewriting *Oedipus, Hamlet, Wuthering Heights, War and Peace, Crime and Punishment, The Metamorphosis, For Whom the Bell Tolls.* We can do it. But do we really want to do so?

The devastating experience of discovering that, in spite of our wishes, Hamlet, Robert Jordan or Prince Andrej died, that things happened in that way, and forever, no matter what we wanted, hoped or yearned during the course of our reading, makes us to feel the shiver of Destiny. We realize that we cannot decide whether Ahab will capture the Whale or not. The real lesson of *Moby Dick* is that the whale goes wherever She wants.

The charm of the great tragedies comes from the fact that their heroes, instead of escaping an atrocious fate, fall into the abyss that they have dug with their own hands because they do not know what expects them — and we, who we see clearly where they are blindly going, cannot stop them. We have a cognitive access to the world of

Oedipus and we know everything about him and Jocasta but they, even if living in a parasitical world which depends on our own, do not know anything about us. A fictional character cannot communicate with his/her counterparts in the actual world. [1]

Such a problem is not as whimsical as it seems. Please try to take it seriously. Oedipus cannot conceive of the world of Sophocles — otherwise he would have not married his mother. Fictional characters live in an incomplete (or, to be more rude and politically incorrect) *handicapped world*.

But when we really understand their fate, we start to suspect that we, too, as the citizens of the actual world, frequently undergo our destiny just because we think of our world in the same way as the fictional characters think of their own. Fiction suggests that perhaps our view of the actual world is as much imperfect as that of fictional characters. This is why successful fictional characters become paramount examples of the 'real' human condition.[2]

Об онтологии литературных героев: семиотический подход

Почему нас глубоко затрагивает судьба Анны Карениной, если мы полностью осознаем, что она — вымысел и в реальном мире ее не существует? Но в каком смысле литературные герои не существуют? Темой настоящей статьи является как раз онтология литературных героев. Автор приходит к выводу, что «удавшиеся» литературные герои становятся важными примерами «настоящей» жизни, так как они живут в неполноценном мире, который для нас познавательно доступен, но на который мы не можем повлиять и в котором случившееся уже нельзя изменить. В отличие от всех других семиотических объектов, которые изменяются в культуре (и подобно, возможно, только математическим объектам), литературные герои никода не меняются и остаются героями своих действий во веки веков.

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[1] On these questions see Eco, Umberto 1979. *The Role of the Reader*. Bloomington: Indiana University Press.

[2] A version of this text has been presented by the author in the University of Tartu on May 6, 2009.

Kirjanduslike kangelaste ontoloogiast: semiootiline lähenemine

Miks meid liigutab sügavalt Anna Karenina saatus, kui me oleme samal ajal täiesti teadlikud sellest, et Anna Karenina on lihtsalt kirjanduslik kuju ja teda ei ole reaalselt meie maailmas olemas? — Kuid mida see tähendab, et kirjanduslikke kangelasi pole olemas? Käesoleva artikli teemaks on kirjandustegelaste ontoloogia. Autor järeldab, et edukatest kirjandustegelastest saavad "tegeliku" elu väljapaistvad näited, sest nad elavad ebatäielikus maailmas, millele meil on kognitiivne ligipääs, kuid mida me ei saa mõjutada ning kus tegusid ei saa olematuks teha. Erinevalt kõigist teistest semiootilistest objektidest, mida kultuuriliselt muudetakse, ja sarnaselt ehk ainsana matemaatilistele objektidele, ei muutu kirjanduslikud kangelased kunagi ning jäävad oma tegude kangelasteks igavesest ajast igavesti.

Sign Systems Studies 37(1/2), 2009

Between fiction and reality: Transforming the semiotic object[1]

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Abstract. The contrast between real and fictional characters in our thinking needs further elaboration. In this commentary on Eco's look at the ontology of the semiotic object, I suggest that human semiotic construction entails constant modulation of the relationship between the states of the real and fictional characters in irreversible time. Literary characters are examples of crystallized fictions which function as semiotic anchors in the fluid construction — by the readers — of their understandings of the world. Literary characters are thus fictions that are real in their functions — while the actual reality of meaning-making consists of ever new fictions of fluid (transitory) nature. Eco's ontological look at the contrast of the semiotic object with perceptual objects (*Gegenstände*) in Alexius Meinong's theorizing needs to be complemented by the semiotic subject. Cultural mythologies of human societies set the stage for such invention and maintenance of such dynamic unity of fictionally real and realistically fictional characters.

The army was going into battle. The soldiers — half of them with automatic rifles in their hands — with their bodies naked from the waists up — took up positions and

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[1] Commentary on Umberto Eco's article *On the ontology of fictional characters: A semiotic approach* in the present issue.

> [...] began to sing pious songs for 10, 15, or 20 minutes. Then the time-keeper blew a whistle. On this sign, the troops began marching forward in a long line, shouting on the top of their voices: 'James Bond! James Bond! James Bond![2] [...] The stone commanders led them and the line commanders ensured that the front line was maintained. Each stone commander carried a stone wrapped in cloth, which he threw at the enemy, at each time calling to each company and leading spirit, 'Ching Poh, Franko, or Wrong Element, take up your position, command your people!' This stone marked the limit past which the enemy bullets could not penetrate, thus creating a protective zone. The Holy Spirit soldiers were briefed not to cross this limit. Only when the stone grenade commanders had thrown their stones even further could the Holy Spirit troops advance again. Behind the stone commanders came the controllers, who sprinkled holy water and prayed. Each controller carried about five litres of holy water in a vessel with a small cup. The holy water was supposed to confuse the foe and stop him hitting his targets. Not until the stone commander gave the order did the Holy Spirit soldiers begin delivering the number of shots ordered by Lakwena. If the time-keeper blew his whistle again, the soldiers slowly retreated in the manner planned beforehand. (Behrend 1999: 59–60)

This obviously bizarre scene of an army moving into a battle is a scene from Uganda sometime in 1986–87 when Alice Lakwena's Holy Spirit Armed Forces (HSAF) attempted to liberate the country from violence and corruption, marching to take over the control of the capital Kampala. Yet the army in action was largely invisible and the use of stone grenades and holy water as weapons oddly out of touch — or so it seems to us — with the thundering realities of AK-47s fired indiscriminately after the singing of hymns ended.

The battle script as described above is closer to a religious procession than to a military tactic[3]. The latter was not needed for the real

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2 The chief technician called himself James Bond.

3 The HSAF campaign was framed by a religious belief system that prohibited killing living beings — humans or snakes. Deeply embedded in the conversion to Christianity in the form of a syncretic religious system it needed to find a solution to the problem — how to kill under the belief system of "do not kill!" The solution was to delegate all the uncertainties of the real living (and dying) to the fate control of the spirit soldiers.

soldiers whose fate was completely determined by their invisible spirit co-fighters. At the maximum of Alice Lakwena's campaign HSAF had 10,000 real fighters, together with 140,000 others — the spirits who were involved in the fight. The spirit fighters — fictions as determinate for the HSAF soldiers as Anna Karenina is in the hands of readers — explain it all: both the win and the loss, the killing of the enemy and getting killed oneself. The pervasiveness of such explanations parallels the omniscopous[4] use of language in fortune telling (Aphek, Tobin 1990). Fictional characters have real consequences for human living and dying on the battlefields — not just for the queries of the minds of the readers of sophisticated novels. They can be created on the spot — when needed — and maintained (or abandoned) if needed further, or not.

Or maybe the heroic realities of battlefields are such as they are made up to be theatrical fictions — united into scenes that are played out in reality (Turner 1982). After all, the history of warfare gives us many examples of ritualizing the military encounters: from colorful uniforms of the fighting armies of the past, to the conventions of how prisoners of war and civilians are to be treated in a military conflict. Even local conflicts — duels or their contemporary transformations in the form of court battles — are frameworks that rely on fictions as their anchor points. Such fictions, however, are situated within the existing social order, the hierarchical set-up of power relations that may be countered by local social conduct patterns. These patterns are built upon hyper-generalized value signs (e.g. "honor", "justice", "loyalty"):

> The duel was characteristic of a socially strategic type of behavior which [...] hemmed around with formalized ritual [...] even though it breached the central ruler's and the state's monopoly of violence. It raised above the masses those who belonged to certain social strata; in the first place the nobles and the officer corps, and then the fighting

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[4] *Omniscopus*= all-viewing. When the fortune-teller tells the client "you will have difficulties but you will overcome these" all possible scenarios for the future are covered.

> fraternities and their middle-class students and their Old Boys — in short, the stratum of those entitled to demand satisfaction. Through it, they submitted to the constraint of a special norm which made the formalized use of violence, possibly with lethal consequences, *a duty for individual people under certain circumstances.* (Elias 1996: 65; added emphasis)

Socially normative situations such as duels, public executions or Shariah stoning of the norm-breakers, etc. are all constructed social dramas that create the illusion of reality to the otherwise un-real objects. Social power holders set the stage for the legitimate and illegitimate violence and thus the killing of people or animals becomes a semiotic object. In other terms — the making of the semiotic object is based on the construction of non-existing objects through social actions.

The reality of non-existing objects

Eco (2009) relies upon the philosophical and psychological heritage of the "Graz School" of Alexius Meinong (1853–1920) in his construction of the semiotic object. The relevant contributions of Meinong and his students have been blissfully forgotten in psychology of our times but retained in philosophy (Albertazzi *et al.* 2001) — especially after the recognition that Meinong's ideas have had substantive role to play in Bertrand Russell's philosophy of mathematics. The "Graz tradition" was unique in the history of psychology and philosophy in Europe by its focus on the contrast between existing and non-existing objects (Bozzi 1996; Findlay 1963; Mally 1904; Meinong 1899; Modenato 1996; for an overview see Rollinger 2008). All mathematical objects are non-existing objects. There are no geometric forms like triangle or square in the real life, even as there are myriads of triangular and quadratic objects that are real and from which these geometric notions could be abstracted. At the same time there are objects we can talk about — "a round triangle" — which cannot be imagined as existent.

Yet *as we can talk about such objects* they are imaginable, even with the result of finding them to be impossible.

While the "Graz tradition" was focused on the ontology of the non-existing objects, it failed to set these objects into a scheme that looked at their transformation. As he was pondering on the notion of "a golden mountain", Meinong did not address the issue of under what circumstances would such non-existing object — or any other of their kinds — emerge in the meaning-making processes of their inventors. This is also not crucial for Eco who uses the examples of already fixed literary characters — Anna Karenina or Sherlock Holmes — rather than covers the torturous process of the life of the writer who is creating such characters. While both Meinong and Eco show the complexity of the *being* of objects — non-existing and semiotic — they prefer to overlook the question of the *becoming* of these objects.

From non-existing objects to semiotic objects

Non-existing objects can exist as the result of semiosis. Meinong's conceptualization of non-existing objects is of direct relevance for Eco's (2009: 83) creation of semiotic objects. Most of the creations of our minds (any abstraction) are non-existing objects. They are created by active agents, persons or social institutions, in their quest for some stability in the otherwise overwhelmingly dynamic world. They become real as they are made up as fictions: real as semiotic organizers of our living — and dying.

The semiotic object is

> [...] every device by which an expression conveys a set of properties as its content [...] all expressions which convey as their proper content whatever we are used to call the meaning of the signified of the expression: the idea of an animal, of a place, of a thing, of a feeling, of an action, of a natural law like universal gravitation, of a mathematical entity, *et cetera*. (Eco 2009: 89)

These properties are *interpreted* by recipients — other expressions — and the series of interrelated interpretations are shared and collectively recorded. The interpretation process might begin from a perceived field — yet move quickly beyond it. Meinong's example of the meaning of the blue sky (Meinong 1899: 238) is a good example of semiosis where the meaning constructed "gets loose" from the perceived object[5] and moves to establish its own form as a semiotic object. The homogeneous field of the sky fills the experiencer's visual field in full, and leads to construction of holistic meaning that — as the language term "the blue sky" ("*Himmelsbläue*") itself — looks as if it is like a point, and yet signifies a field of no discernible boundaries. The unclouded blue sky has no limits[6]!

Furthermore, even points are indefinite — as long as the time of their emergence is considered:

> A punctiform object in time has no parts [...] If we rap the surface of a table with the point of a pencil, the 'tap' is perfectly perceptible and distinct against the background of the usual noises around us, but it is impossible to distinguish between the moment at which it starts and at which it ends: in the 'tap' the beginning and the end coincide. This very important property can be captured by a paradox: *when the punctiform event happens it has already happened.* (Bozzi 1996: 297)

This paradox bears upon Eco's blind spot — while emphasizing the fluctuations between the fictional and real characters, their ontology, he takes no interest in the processes by which these characters are created. Signs are not given but constructed means for communication. And Umberto Eco is himself the master of such construction as

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5 Meinong (1899: 237) calls these *Wahrnehmungsflüchtige Gegenstande* — objects that, when being in front of the perceiver (Modenato 1996: 95) lead to apprehension that transcends the perceived object and creates a semiotic object in its place.

6 More precisely, its limit is ever infinite — as the notion of the horizon is a boundary that always moves away together with the horizon-maker's efforts to move towards it (Smith 1999)

writing fiction entails the creation of an analogue of a distorted mirror. When we observe ourselves in it, our feeling is a playful double, where

> [...] on the one hand, we enjoy the hallucinatory characteristics of the medium. We therefore decide (for the sake of playing) to accept that we have three eyes or an enormous stomach or very short legs, just as we accept a fairy tale. In reality, we give ourselves a sort of pragmatic holiday: we accept that the mirror, which usually tells the truth, is lying [...] The game is a complex one: on the one hand, I behave as if I were standing in front of a plane mirror telling the truth, and I find that it gives back an 'unreal' image (that which I am not). If I accept this image, I am helping, one could say, the mirror to lie. The pleasure that this game gives me is not of totally semiotic nature but of aesthetic nature. (Eco 1984: 217–218)

It is clear from games like that — helping the mirror lie, or doing the same to politicians while reading daily newspapers or accepting television images as if these were lies-that-are-real — *there is no interpretation of a semiotic object without the interpreter, that is, the semiotic subject.* It is the active intentional person — the author in case of fiction, or the reader (or non-reader) of that fiction who are reconstructing any messages. They even create an interpretation out of nothing — or almost so — as indicate psychologists' uses of inkblots as projective techniques and fortune-tellers stories based on palm lines. In some ways, the whole world a person lives in is a distorted mirror — and if it is not, the person positions oneself so that it seems to be. The reliance on cosmetics — from makeup to cosmetic surgery — indicates the need to change one's own form when we have to face a plain mirror.

Transforming semiotic objects: growth of generalization

Semiotic objects are constructed by the meaning-maker who both expresses and interprets the meanings one lives with. Karl Bühler's

Organon Model (Fig. 1) is here in action within Umberto Eco's *Umwelt*.

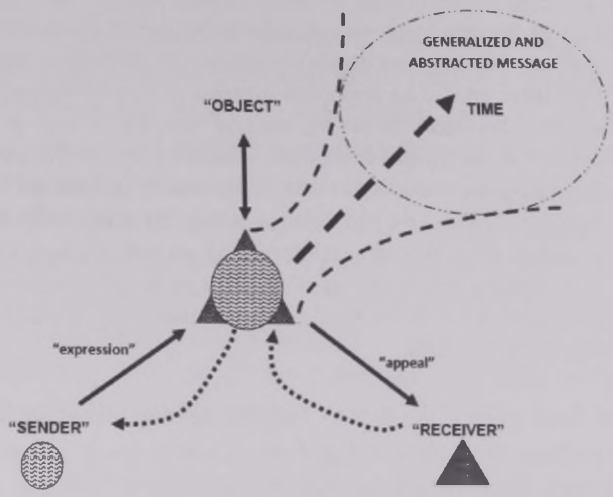

Figure 1. The Organon Model (Bühler 1990) modified to depict abstracting generalization of the message in the communication process (solid lines and components in quotation marks are the original components in Bühler's model)

The uncertainty of the communicative messages (depicted by overlapping circle and triangle in the middle) leads to abstractive generalization. The semiotic object — similarly to Meinong's "escaping perceptual object" (which becomes "homeless") — moves in the third dimension, towards ever greater abstraction of generalized feelings (*generalized and abstracted message* in Figure 1). It is through such over-generalized meanings, once constructed, that make the difference between a reader who feels devastated by the undoubtable act of Anna Karenina's demise, and a reader who would treat the event as yet one more tally in the frequency count of suicide cases in 19th century literature. So when Eco correctly focuses on the immutability of the fictional characters —

> [...] unlike all the other semiotic objects, which are culturally subject to revisions, and perhaps only similar to mathematical entities, they will never change and will remain the actors of what they did once and forever — and it is because of the incorrigibility of their deeds that we can dare to say that it is true that they were or did this and that. (Eco 2009: 94)

— it is the semiotic subjects, the users of the fictional characters in their own lives, who change. They change as they *are participant observers* in the fixed lives of the fictional characters due to the authors' subjecting the characters to public scrutiny. Any author has to perform the exhibitionist act by bringing the private encounters with the invented characters to the public domain. Some decide at times against it — authors burning their own just finished manuscripts are known in literature.

But once the fictional characters survive the "going public" they become indispensable precisely as they cannot change. Eco points that out eloquently,

> The charm of the great tragedies comes from the fact that their heroes, instead of escaping an atrocious fate, fall into the *abyss that they have dug with their own hands because they do not know what expects them* — and we, who see clearly where they are blindly going, cannot stop them. (Eco 2009: 96; added emphasis)

Yet it is not the hands of the heroes themselves but their makers — writers, Hollywood film makers, etc — through which the characters are made to act so that they fall into the abyss and by it keep us, the spectators, vicariously thrilled. The author may be accused by a reader for *letting* a certain character die or act in an undesirable (to the reader) a way, to which the author's easy defense is that the character *did it by herself*. For the author the characters that become fictional in the end (in the novel) may have reality of one's imagination when the novel is being written. Once the novel is finished the characters are destined to become fixed. As Eco points out, "Fictional characters live in an incomplete, handicapped world" (Eco 2009: 97)

The reality of life, ending in death, sets the stage for such move into the handicapped world. The finishing of a novel for an author may be equivalent to the death — the imaginary real characters now become fixed in the finished text. Publication of a book is in a way the funeral ceremony for the characters for its author and a new life for the semiotic subjects. The myriad of interpretations of Hamlet would continue as long as our education systems include him in our worlds. The fate of characters in fiction is a process similar to what happens with real people after their death — they become fixed as ghosts, spirits, or forefathers of social upheavals. Napoleon existed as a real person until he died and ever since he has been a ghost moving through the European minds, used for various meaning-making purposes. A miscarried foetus who had no chance to become a person, may be seen as a real person with all "baby things" (Layne 2000). We all become fixed as fictional characters — like Anna Karenina. Cemeteries and memorials are a living testimony of such transformation that sometimes evokes real and reverberating social turmoils[7].

Yet the fixed characters of novels, in contrast to their readers, are not only "twice born" (in the mind of the author, and after delivery to public), they are also "twice dead". First, they die for the author when the book is published. But the second death is more conspicuous — the fading away of the fixed fictional characters from our playgrounds of meaning-making sends them into the oblivion. Eco is in a good fortune being able to use the image of Anna Karenina — but would have had little success making his argument with the help of Dumov — Anna Karenina's peer in the pantheon of fictional characters whom Chehov created as a doctor who tragically died saving the life of a child[8]. Dumov was widely impactful in the cultural communication a century ago, yet in our 21st century he has passed away. Anna Kare-

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[7] Raudsepp, M., and Wagner, W. *The essentially other — Representational processes that divide groups.* Paper at Workshop "Trust and Distrust in Inter-Group Conflict and Communication", Napoli, June 2008.

[8] I am grateful to Ellina Polonskaya and Eleonora Magomedova for finding Dumov for me — a naïve psychologist — from among the many dead fictional characters in the Russian literature.

nina, Raskolnikov, and Hamlet continue to be card-carrying members in this Club of the Glorified.

The fictional characters still do not change even there — in their fixed worlds. They are destined to live and die in their immutable "handicapped worlds". They are sacrificed from the beginning in that role — for the sake of the real people who always move towards the fictional roles, yet purposefully refuse to become fixed in these. The author moves on to write another novel, rather than reiterate the one just finished. It is only in the case of canonical texts relevant for religious systems where "the true faith" is followed by their constructors. In the social sciences we start treating the searches for understandings by famous thinkers, which were actually tentative efforts usually phrased in vague terms, as if these words are final and immutable. The disciples of such famous scientists — whom they turn into fictional characters *by the fame they attribute to them* — are the grave-diggers for the very ideas they revere and propagate as the "truths of the grand masters". The authors made famous by their followers may become gloriously fictional characters in science, through fixing their ideas even in their real lifetimes. Some even enjoy it.

The importance of moving through boundaries: the subject really matters

Intentionality is being born through the tension between the semiotic subject and the semiotic object. This look at the role of semiosis gives a renewed impetus for the philosophical perspective of Franz Brentano who posited the central feature of intentionality to be inherently present in human action (Rollinger 2008). The communication between goal-oriented persons who re-construct the message (see Figure 1 above) leads to the hyper-generalization of the highest level of willful agency ("why do you want X?" — "*Because* I want X"). This is the result of constructing the semiotic object out of a real ("why do you want this ice cream?") or of the non-existing ("why do you want to be famous?") one.

Such semiotic construction of intentionality entails crossing boundaries that limit the object of desire from the growing intention for it. If any X a person wants were instantly available, the semiotic object X (or *wanting X*) could not emerge. Only if there is, at the moment, inaccessibility of X, would statements of wanting X be possible. The use of semiotic means — turned into symbolic resources (Zittoun 2006) — includes fixed literary characters like Hamlet, Anna Karenina, and others. Their stories, similarly to other myths — serve as mutually shared focal points in relation to which the person's intentions in the given setting are being re-conceptualized. "Am I like Raskolnikov?" or "I do not end up in the shoes of Anna Karenina" are symbolic tools used to regulate the relating to the social boundaries. Inventing prayers is another (Del Río; Alvaréz 2007). Thus, persons need fictive characters for the flexibility of one's meaning-making. These characters become solid islands in one's own personal world in relation to which they organize their own movement through the life. If by some miracle these characters were to become unfixed — Hamlet would be re-born and finds a solution to his doubts, and marries Ophelia, or Raskolnikov finishes his studies and becomes a respected professional (Eco 2009: 95) — their functional use for the readers would vanish. We do not really want this[9].

Conclusion: The fate of the living

Umberto Eco is a fiction. Whereas it may well be true that there exists a human being carrying in his luggage some identity document specifying this name and linking it with a photo image that remotely matches the appearance of the person who gave a talk in the main hall of Tartu University on May 6th, 2009, and it may also be true that some other real person on the same day gave him a piece of paper

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[9] However, new forms of television that allow for wishful re-writing of the scripts of next series of the soap operas based on viewer consensus would be an interesting real-life experiment here.

specifying that now he is not just a person with a name but a new *doctor honoris causa* of that university — through all these meaning-making moves we are creating fictions-in-the-real. Recurrent symbolic acts of marking time — birthday congratulations — are of similar kind. The day of our birth is a coincidence — but accentuating it by rituals at some intervals creates the fictional character of the person being 5, 15, 50 or 150 years old — and guiding the person to "feel one's age" (or deny it). The semiotic object is possible only through the collaboration by the semiotic subject — the meaning-making organism. Umberto Eco's eloquent fictions — about others and about himself — are a testimony to the restless eagerness of the inquisitive human minds who create beautiful and horrifying fictional worlds — and inhabit them.

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Между фикцией и реальностью: трансформация семиотического объекта

Противоречие между реальными и вымышленными героями в нашем восприятии нуждается в дальнейшей разработке. В моем комментарии к наблюдениям Эко над онтологией семиотического объекта я полагаю, что человеческое семиотическое толкование влечет за собой постоянную модуляцию отношений между сферами реальных и вымышленных персонажей в необратимом времени. Примеры литературных персонажей являются теми кристаллизующимися фикциями, которые функционируют для читателей как семиотический якорь в зыбкой конструкции их понимания мира. Литературные персонажи являются, таким образом, фикциями, которые реальны в их функциях, — в то время как фактическая реальность смыслообразования состоит из все новых и новых фикций текучей (изменчивой) природы. Онтологическое видение Эко

контраста между семиотическим объектом и перцептивными объектами (Gegenstände) в рамках теории Алексиуса Мейнонга нуждается в привнесении семиотического субъекта. Культурные мифологии человеческих сообществ подготовили почву для таких изобретений и поддержали динамическое единство фиктивно реальных и реально вымышленных персонажей.

Väljamõeldise ja reaalsuse vahel: semiootilise objekti muutumine

Erinevus reaalsete ja väljamõeldud isikute vahel meie mõtlemises vajab täpsemat määratlust. Käesolevas kommentaaris Eco käsitlusele semiootilise objekti ontoloogiast väidan, et inimmõtlemise semiootiline ehitus eeldab tegelaskuju reaalse ja väljamõeldud oleku vahelise suhte katkematut muutumist pöördumatus ajas. Kirjanduslikud kangelased on näide kristalliseerunud väljamõeldistest, mis funktsioneerivad semiootiliste ankrutena maailmast arusaamise konstrueerimise voolavas protsessis (lugeja poolt). Kirjanduslikud kangelased on seega väljamõeldised, mis on oma funktsioonidelt reaalsed, samas kui tähendusloome tegelik reaalsus koosneb üha uutest voolava (ehk pidevalt muutuva) loomusega väljamõeldistest. Eco Alexius Meinongi teoorial põhinevat ontoloogilist arusaama semiootilise ja tajuobjekti (*Gegenstände*) erisusest tuleks täiendada semiootilise subjekti mõistega. Taolist väljamõeldist võimaldavad ning väljamõeldislikult reaalsete ja realistlikult väljamõeldud tegelaskujude dünaamilise ühtsuse säilitamise eest seisavad ühiskondade kultuurilised mütoloogiad.

Facing emergences: Past traces and new directions in American anthropology
(Why American anthropology needs semiotics of culture)

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Abstract. This article considers what happened to American anthropology, which was initiated by the scientist Franz Boas, who commanded all fields of anthropology, physical, biological, and cultural. Boas was a brave field worker who explored Eskimo land, and inspired two famous students, Ruth Benedict and Margaret Mead, to cross borders in new kinds of studies. After this florescence, there was a general return to linear descriptive positivism, superficial comparisons of quantitative cultural traits, and false evolutionary schemes, which did not introduce us to the personalities and inner worlds of the tribal peoples studied. The 1953 study by the philosopher David Bidney was a revelation. Bidney enunciated and clarified all my doubts about the paths of anthropology and his work became to some extent a model for a narration of the story of American anthropology. In many ways he envisaged a semiotics of culture formulated by Lotman. I try to illustrate the fallacies listed by Bidney and how they have been partially overcome in some later anthropological studies which have focused on symbolism, artistry, and subjective qualities of the people studied. I then try to give an overview of the school started by Lotman that spans all human behavior, that demonstrates the complexity of meaning and communication, in vast areas of knowledge, from art, literature, science, and philosophy, that abjured strict relativism and closed systems and has become an inspiration for those who want anthropology to encompass the self and the other, and Bahtin's double meaning. This paper was inspired by Bidney as a call to explore widely all possible worlds, not to abandon science and reality but to explore deeper inner interrelations and how the aesthetic may be indeed be paramount in the complexities of communication.

Part 1

1.1. Introduction: Bidney's *Theoretical Anthropology*

How did I begin this essay? The subtitle of the March 2005 issue of the *American Anthropologist* (107/1) was *Ethnographic Emergences*. This sparked a memory of a book that fascinated me years ago by the philosopher David Bidney, entitled *Theoretical Anthropology* (1967, first published in 1953). Bidney's core word was "emergences". I was then inspired to reflect on some of Bidney's far-sighted critiques and arguments, many of which foreshadowed the perspectives of the growing semiotic movements.

Why had I never heard that phrase "emergences" in the remarks of the professors at Columbia where I was a student, and the university that, thanks to Franz Boas, had founded the first department of anthropology? While Boas was a brilliant and inventive master of all aspects of anthropology, his work was soon ignored with some exceptions until recently. Bidney's evaluations were also ignored by anthropologists with the exception of Kroeber. Indeed, after the virtual fluorescence of creativity by two of Boas' students: Margaret Mead, who had the courage to embark on fieldwork alone at the age of twenty-five in Oceania, who had the gift of empathy and creativity to perceive and translate the gestures and beliefs of three different groups, and the second student, Ruth Benedict, who was indeed a philosopher and poet as well as an anthropologist. She saw as a metaphor a Neitchian tint in the worldview of the plains Indians and she poetically depicted the Zuni as Apollonian. Such contributions enrich our minds whether or not they are epistemologically real, in Searle's terminology.

But the work of these two gifted individuals originally celebrated, nevertheless with some exceptions, were neglected for decades for tired methodologies, positivist and descriptive and static portraits which omitted the history of the various tribal groups, which were distilled in isolation as in a museum and were depicted as retaining their cultures as frozen, and incorrect evolutionary schemes presumed to be universal.

Boas' great contributions were hardly examined by the growing new field of anthropologists, although Boas liberated cultural theory from the strict, unsubstantiated linear evolutionary rules proposed by Morgan and Spencer. Boas was incorrectly called anti-historical, although he upheld the importance of historical evidence of primitive peoples, in so far as it could be substantiated from myths, memories, and some artifacts. Indeed, while Darwin collected quantities of empirical data to support his emerging theory of diversity in evolution, nevertheless the myth of unilineal evolution continued to be taken seriously by many. Thus the early heritage was distorted with few exceptions. Boas courageously broke down myths and stereotypes concerning racial and ethnic traits and false evolutionary beliefs, and showed for example, that any language could be learned by any infant, thus there was no universal evolutionary path for language development.

Bidney's oeuvre had been silenced, with some exceptions such as the writings of Kroeber. In this paper, I review some of Bidney's ideas and then consider American anthropological writings exemplifying the very fallacies he discusses and others that embrace some of Bidney's far-seeing insights. But few examples exhibit the breadth and brilliance of Peirce's vision, nor that of Lotman's semiotics of culture and the work of his colleagues, as well as that of Roman Jakobson, all of which were not available to Bidney.

1.2. Reflections on David Bidney's insights into a semiotics of culture

Bidney (1967: 37) held that he offered a "first statement, so far as I know, of the doctrine of emergent evolution, as applied to the history of human civilization".

As Bidney (1967: 40) reminds us, according to Aristotle, the sciences were arranged in a hierarchical order according to their degree of abstraction, a view challenged by Descartes, Bacon, Voltaire, as well as Bidney, all of whom questioned the idea of continuity and plenitude.

Foreseeing, sharing and critiquing Darwinian thoughts, they believed that some species were now extinct and others were in the process of extinction. Referring to the ideas of critical rationalists, Bidney (1967: 43) asserted that the Darwinian "sceptics indicated that there do seem to be leaps in nature and the assumption of a continuous scale of being is nothing but a product of 'presumptuous imagination'".

As Bidney noted, John Locke "denied that man has any knowledge of 'real essences', and concluded that our conception of species are only 'nominal essences', which do not correspond to any fixed natural boundaries in natural species" (Bidney 1967: 44; quoting Locke 1979[1824]). For Bidney, evolution is possible because there is continuity in the development of living beings, but also there is emergence of novelties or qualitative variation (Bidney 1967: 47). Aristotle's principle of "the hierarchical continuum" was combined with the evolutionary principle of the transformation of species (Bidney 1967: 47).

Bidney's close collaborator, Alfred Kroeber, the leading anthropologist following Boas, who established a second department of anthropology at the University of California, was indeed a historian who brought to the fore empirically established historical facts, but he upheld the complete separation of the organic and the superorganic. In 1945, this was partially rejected by Kroeber himself in his dynamic concept of change which liberated the diversity and freedom of the critical mind of the individual, which was the position of Boas. Referring to his friend Kroeber, Bidney wrote that although originally he "mistakenly saw strict separation of organic and social, I nevertheless called for the special qualities in the development cultural phenomenon" (Bidney 1967: 37). Bidney quotes Kroeber:

> A new factor has arisen [...] a factor that had passed beyond natural selection, that [...] rocked and swayed by the oscillations of heredity that underlay it, nevertheless floated unimmersibly upon it [...] The dawn of the social that is not a link in any chain, not a step in a path, but a leap to another plane. (Bidney 1967: 37)

Bidney writes that as far as he knows, these words are "the first statement of the doctrine of emergent evolution as applied to the history of human civilization" (Bidney 1967: 37).

Referring to the causes of culture, Bidney held that only individual societies are the efficient cause of cultural processes, which must not be confused with the formal and material conditions and cultural activities of persons in society (Bidney 1967: 33). Culture considered in its realistic and idealistic aspects requires a union of all forms of causality, rather than a focus on only unitary causal explanations such as the historical or Marxist ones, all of which ignore that man is a self-determining agent (Bidney 1967: 33).

Though not knowing Peirce, whose writings were hardly available, Bidney (Bidney 1967: 3) pointed out that "Man is a self-reflecting animal in that he alone has the ability to objectify himself, to stand apart from himself [...] Man alone is capable of reflection, of self-consciousness, of thinking of himselves as an object". Humans are rational in the sense that they can conceive concepts or meanings as having universal significance. It is this ability to formulate concepts or symbols which renders man a symbolic animal and enables us to engage our logical, rational processes of thought. Non-human animals have the ability to perceive signs that have an immediate pragmatic value with reference to a given situation, but not referring to the past and the future. Nor can non-humans conceive of universal symbols or meanings and thereby create a language by which to communicate a cumulative result of their experience and reflections (Bidney 1967: 3). Thus, Peirce's far-sighted concept of "man as a sign" was suggested by Bidney as well as the possibility of animals' use of signs, which erodes the boundary between humans and non-humans, as well as the boundary between primitive man and man in civilization.

Bidney reflected that language originated from the human desire to communicate experiences and thoughts to others and that human speech is both a cause and effect of social communication, but human communication is the primary function of language (Bidney 1967: 4), which suggests Bahtin's dialogue and Jakobson's belief that dialogue precedes monologue.

Bidney described the world of primitive man as an imaginary super sensuous world, a magic world of perpetual miracles where anything can happen and practically nothing is impossible. The primitive imagination is the source of poetry, religion, myth and art, and as Lévi-Strauss showed, also primitive science existed based on available context, and inventing bricolage. Later Eric Wolf revived the importance of imagination as the dominant source for ideology. "As a rational animal," Bidney wrote,

> man is motivated by the quest for intelligibility, for meaning in his life and the world in which he exists. Because of his capacity for reflection and symbolic conceptualization man also seeks to understand the significance of his conduct, as well as his origins and destiny. Even primitive man [...] speculating upon the origin of his society and culture and attempts to provide some answer to the great enigmas of birth and death (Bidney 1967: 5).
>
> Bidney concluded that "myth, religion, art, philosophy, and science are the historic expressions of man's quest for an intelligible world, for a world of meaning and value" (Bidney 1967: 5).

For Bidney, the dual nature of man is conveyed by his determinate psychobiological structure and function "and his indeterminate, historically acquired cultural personality [that] presupposes a certain measure of human freedom or self-determination" (Bidney 1967: 9). Such a position, taken by Bidney, was opposed to the deterministic, reification, or reductionist systems he viewed as fallacies.

Part 2. Bidney's fallacies: Examples

The following remarks discuss Bidney's fallacies, the use of which I believe has held back the development of American anthropology theory.

2.1. The positivist fallacy

According to Bidney "The ultimate reality can be investigated by science but can never be completely known or verified as scientific theory and is subject to constant critical revisions" (Bidney 1967: 21). Practice refers to actual behavior, belief, and theory. Bidney holds that "the realists tend to confuse the actual aspects of culture with ideal culture by assuming that the covert or professed ideals are carried out in practice, whereas often this is not the case" (Bidney 1967: 32). This he calls the "positivistic fallacy" (*ibid.*).

2.2. The normative fallacy

According to Bidney (1967: 32), the normative idealists tend to define culture in terms of social ideals and tend to exclude the actual practice as not properly constitutive of culture, which may be called the "normativistic fallacy" or reification.

Bidney warns that it is not sufficient simply to describe a culture's practices, nor is it sufficient to assume that the ideals professed by the members of society are actually adhered to in practice. Every culture has its ideal and practical aspects and the social-scientist has to show the interrelation between the two areas.

2.3. The metacultural fallacy

Metaphysical fallacies of misplaced concreteness are the result of not viewing culture in both its theoretical and practical aspects. This would eliminate the necessity of trying to explain how it is possible for an abstract, logical structure to interact with an individual or society. (Bidney 1967: 32) Metacultural reality provides the pre-conditions for any cultural processes (Bidney 1967: 160). But Bidney agrees with Aristotle that the logic of power is not primary because creativity and imagination can transcend social environment. Therefore Bidney is

not a total relativist: rather he has a general theory of relativism integrating all cultural worlds (Bidney 1967: 179).

Bidney comments that as a methodological device, it is frequently useful to abstract certain phenomena for systematic treatment while ignoring individuals and their motivations that were undoubtedly involved. It may be considered appropriate to act and think "as if" certain forms or patterns of phenomena do occur independently of the particular individuals and societies which initiated them. That was also Kroeber's later method but is nevertheless simply a strategy.

2.4. The fallacy of reduction to a single cause

In a fundamental statement, Bidney states that only individuals and societies are the efficient cause of cultural processes, which must not be confused with formal or material or final causes and cultural activity of persons in society (Bidney 1967: 33). Culture requires a union of all forms of causality, as opposed to Marxist economic determinism, a fallacy which overlooks the function of man as a self-determining agent (*ibid.*).

Leslie White's work exemplifies the "culturalistic fallacy" (or reductionism or misplaced concreteness), which is committed when he mistakes an epistemic abstraction, such as the number of calories, for an ontological level of reality or autonomous order of nature (Bidney 1967: 107).

2.5. Nominalistic and formalist fallacies

Summing up fallacies, Bidney looks to common elements and qualitative novelty. To reduce all qualitative differences to a single kind of reality is also a fallacy of reductionism. The "nominalistic fallacy" is based on the principle of plentitude — the assumption that discrete entities are unrelated to one another. "The implication is that universals are but names, and thus there is no logical basis for relation

among things" (Bidney 1967: 44). The fallacy of formalism may also assume that forms of beings are unrelated to one another.

2.6. The relativist fallacy

The "relativist fallacy" as opposed to the meta-cultural concepts, obscures any cultural processes (Bidney 1967: 188). If one is to agree with Aristotle and Einstein in postulating the fundamental creation of the human imagination, it would follow that man is inherently capable of transcending the limitation of his social cultural environment (Bidney 1967: 179). The impossibilities of cultural relativism as applied to individual cultures are well argued by Bidney (1967: 181). What does a meta-investigation require? It would subsume the basic logical primitive assumptions of the perceived cultural reality, deep cultural norms of any given cultural system and the assumption that ontological factors shaping experience provide pre-cultural conditioning for any cultural process whatsoever. Bidney rejects the antithesis of absolute determinism versus freedom of thought. He holds that "to deny freedom of thought in the alleged interest of science is to undermine the very conditions of the scientific process" (Bidney 1967: 179). The search for any cultural factors that universally unite humans points to one gap between the semiotic investigation as opposed to hypotheses and other studies which do not ask such questions, but in some cases may imply them.

Partly after looking at these problems, I ask what kind of a basic significant unit in human culture shall we have? A cultural unity which impoverishes human life and thought by excluding whole areas of cultural experiences as meaningless may have the virtue of simplicity, but will fail nevertheless regardless of the learned support it may receive. Importantly, "cultural integration [...] is not an unqualified good and [...] everything depends on the nature of the final composition" (Bidney 1967: 182). For Bidney the problem of cultural integration is essentially the harmonizing of diverse polar interests and disciplines, each of which must enjoy a measure of autonomy to

ensure its own creative advance. This principle of autonomy points to the limitations of logocentrism essentially critiqued by Lotman and Jakobson.

The above summarizes some fallacies, pointed out by Bidney, that have been frequently been a part of anthropological writings. I turn now to examples of articles considering how they relate both negatively and positively to the various principles Bidney described.

Part 3. Ethnological Examples

3.1. Bill Maurer: *Introduction to ethnographic emergences*

The notable issue of the *American Anthropologist* (2005, 107/1) that I have referred to, entitled *In Focus: Ethnographic Emergencies*, is introduced by Maurer's article *Introduction to 'Ethnographic Emergences'* (Maurer 2005). For Maurer, "world system theory, modernization theories, structural Marxism, and person-centered interpretive approaches offered analytical tools that did not readily fall into the traps of evolutionary or ecological determinism" (Maurer 2005: 1). The author states that "structuralism, hermeneutics, and structural Marxism offered an account of the meaningful words within which social action took place with a rigor lacking in U.S. anthropology" (*ibid.*). Asserting that anthropology has been going beyond the limits of narrow, traditional anthropology, and into other areas of knowledge for quite a while, however, this is now becoming an extremely conscious cry, apparently. The author seems to have agreed with Sherry Ortner's remark that Bourdieu's practice theory and related others obviated the "stale debates of materialist approaches, symbolic anthropology, and structuralism over causality, and even deeper (but rarely empirical observable) structures" (Maurer 2005: 1).

For Maurer, open anthropology is an inter-relational field that bleeds across its frames. However, the frames need to be understood as metaphorical and porous. Maurer speaks of complex hybrids of nature and culture, for example, the ozone hole story, global warming, or

deforestation (Maurer 2005: 2). Is hybrid an appropriate term for the interrelation of nature and culture, or local and global, or particular and general, since "hybrid" is in fact the characteristics of all interpenetrating cultural customs and beliefs and biological interrelationships? "Hybrids" are in fact essential for growth and change in culture.

Maurer concludes his article with questionable comfort. He holds that the

> point of an emergence is that you do not know where it is going. The point of an anthropology of emergence is not to attempt to achieve the universal language adequate to all transformation, but to go along for the ride, in mutual, open-ended and yet limited entanglements which one might call friendship or perhaps ethnography (Maurer 2005: 4).

But this statement trivializes serious theoretical findings and quests for universals, no matter how difficult the search.

It appears to me that Maurer takes far too rigid an approach to various realms such as biology, socio-biology, natural history, ethics, ethnic sociology, and so forth. The issue of reality does not mean things escaping from their pre-made domains but searching for the complex realities of any particular phenomena which naturally become penetrating areas that are not marked off by man-made domains or frames.

Maurer's answer to the myriad approaches of diversity in culture and nature as a capitulation to entanglement misses the point. Certainly Peirce's abduction and hypothetical thinking, and Crapanzano's imagination, and the Lotman school of interlocking texts and underlying rules and even explosion are not pure chaos but are challenges to further analysis and we are not going along blindly for the ride which trivializes the event.

3.2. Cognitive anthropology

Roy D'Andrade's *The Development of Cognitive Anthropology* (1995) questions the so-called dichotomy between qualitative and quanti-

tative, favoring the latter. In the forward, the author states that cognitive anthropology is opposed to structuralist, interpretive, and postmodern conceptions of culture. In this summing up, D'Andrade holds that cognitive anthropology is thirty-five years in the making, establishing that culture is knowledge, as was formulated by Ward Goodenough. The aim of cognitive anthropology is to determine the content and organization of such knowledge, and the underlying cultural categories through componential analysis of phonemics and phonetic systems and kinship terminologies. He notes nevertheless that Geertz (1973a: 12) disapproved of the formalizing and quantitative aspects of this approach, referring to the cognitive fallacy as supposing that culture consists simply of mental phenomena.

Going through the various moves in cognitive anthropology studies, D'Andrade tells us how features and taxonomic relations can be approached by means of semantic analysis of various domains such as kin, plants, colors, etc. By 1980, the dominant approach became schema theory in relation to networks concerning the nature of mental representations. This was followed by a study of cultural models and metaphors. Cognitive anthropologists break culture into parts — and develop theories from the pieces of culture. D'Andrade (1995: 247) writes that:

> [I]f culture is placed in the mind, then the organization and limitations of the mind can be used to find cognitively formed units — features, prototypes, schemas, propositions, theories, etc. This makes possible a *particulate* theory of culture; that is a theory about the 'pieces of culture', their composition, and their relation to other things. One has to have a notion of separable units before the study of their distribution has any meaning.

D'Andrade sees the current trend as the rejection of the concept of culture, and substitution of the term "discourse" when referring to symbols and meaning. Rejecting the notion of culture as a single structure "does not imply that there is no reason to investigate culture" (D'Andrade 1995: 251). We need to investigate how society works and the cognitive system — reasoning, memory, and perception. D'Andrade concludes that cognitive anthropology has been able to

provide reliable descriptions of cultural representations, and a bridge between culture and the functioning of the psyche.

For cognitive anthropology, parts precede the whole, knowledge is privileged and psychological traits serve the needs of the culture carrier in mapping out his or her life. Neglected is the relation to the aesthetic, emotional syndromes, imagination, and creativity and context. Thus the behaviorist heritage still lurks — what you see, feel, smell, and what computational machines can evaluate as valid aspects of the culture's map, are the empirical realities. Different problems not answered by a quantitative approach come to be dropped out — problems such as Kluckhorn's values, Kardiner's personality and culture, Benedict's *Patterns of Culture*, Crapanzano's imagination, and others. What is left out appears to me to be more essential than what is included. A major problem is the method: description, quantification, particularization, ruling out all that may not fall within this rubric, overlooking the integration and interlocking of aspects of the mind and culture which must precede any attempt to divide up culture, which indeed is not stable since interrelations are vulnerable to many aspects of chance, history, and context.

3.3. Elizabeth Brumfiel: Cloth, gender and continuity and change

In Elizabeth Brumfiel's article *Cloth, gender and continuity and change* (Brumfiel 2006), she compares backstrap dash loom weaving in three cultural contexts and historical dimensions — ancient Mayan, ancient Aztec, and 20th century Meso-Americans. Within each group, weaving had a different meaning and function. For example, among the Maya, weaving defined class; among the Aztecs, weaving defined gender and among 20th century Meso-Americans, weaving defined ethnicity.

There is considerable discussion in this article about the background of these functions, and the changes and meanings of the various forms of weaving. The author wishes to find some of the underlying paradigmatic properties of these three elements. She

criticizes Saussurean linguistics for requiring understanding of a thing by understanding what it is not. This study is primarily a historical and descriptive narrative of three groups of peoples. It does not advance much beyond the referential meanings, and the deeper levels of the aesthetic, the metaphorical, and the poetic are barely implied, but it does at least restore the historical method and the issue of multifunctionality and cultural meanings.

3.4. Russell Leigh Sharman: *Re/ Making La Negrita: Culture as an Aesthetic System in Costa Rica* and Turner's Remarks

The main concern of the next article *Re/ Making La Negrita: Culture as an aesthetic system in Costa Rica* (Sharman 2006) is the question of how meaning is produced in the veneration of La Negrita, the Black Madonna and also the patron of Costa Rica. Both appear as an apparition and an icon. The article argues that meaning is produced and reproduced through the "attachment of value to [...] the experience of worshipping a tiny stone carving of the Madonna and child" (Sharman 2006: 842). According to the author, meaning is rarely shared as it is constrained by social relationships of power. Meaning is considered as produced, reframing culture as an aesthetic system, and is understood as the "primary processes of valuation" (Sharman 2006: 843) as they relate to experience and the re-creation of experience through cultural production.

The author holds that "crucial to this argument is the distinction between the perception of value and the production of meaning as two parts of an aesthetic system" (Sharman 2006: 843) and that "what becomes recreated as socially valued experience in this aesthetic system [...] is rooted in relations of power that are hegemonic in the Gramscian sense" (*ibid.*). However, according to Turner "agency is not delegated to intellectuals as it is in Gramsci's formulation, it is inherent in the democratic quality of 'an experience', which is able to 'repudiate all pasts'" (Turner 1986 in Sharman 2006: 843). There is a dialectic tension between the immediacy of experience and the media-

tion of power that forces constant revising (Turner 1986: 36 in Sharman 2006: 843).

As an object of religious worship, La Negrita is both "Other and intimate, producing a phenomenological bracketed experience — a salient moment of religious awe" (Sharman 2006: 844). The article traces the dynamic history of the La Negrita from an indigenous ritual to an instrument of power utilized by the Spanish in nationalist movements. According to the author, "the cult of the La Negrita began as an invention of the church and the colonial state to recognize the growing mulatta population around Cartago" (Sharman 2006: 845). "La Negrita became a black symbol used to further segregate the colonial population" (*ibid.*). The complex history continues but the argument ends with the following conclusion. "La Negrita exists at the nexus of an aesthetic system where the egalitarianism of experience is always in conflict with the authoritarian meaning [...] Together, they offer a more nuanced understanding of culture as an aesthetic system, and what happens in the space between a significant event and an event of significance" (Sharman 2006: 851).

The author explains culture as an aesthetic system in only a general way. Jakobson was a pioneer in the importance of aesthetics but also of context, multifunctionalism, and multisemiotics, as well as Arnheim and others. However, Sharman's treatment does not concern individual behavior but rather is a history with the exception of a short myth. Dialogue is also not a part of Sharman's depiction — for that we have to look to Bahtin, and others of the present group in Tartu. It is also unclear why value and meaning need to be considered as two separate parts of an aesthetic system.

3.5. Anthropology: A diplomatic middle way

Bruce Knauft (2006) considers anthropology in the middle. He believes that negative paradigms need not exist in cultural anthropology. He opposes master theory's reliance on master narratives and history, giving preferred American anthropological examples. Rather, this

"part" approach is exemplified by mosaics of part theoretical assertions, part historical events, and part activist voices, and does not rely on general theories and paradigms or suggestions about creative and critical combinations. Knauft argues that anthropology is post-paradigmatic. The concept of culture has defuse meanings and therefore the term structure should be cast in the adjectival form, structural. Practice and agency all could be adjectival, as could modernity. Theory is also reduced to theoretical.

Knauft notes that according to Catherine Lutz (*The gender of theory*, 1995), master narratives were associated with men while an example of the middle ground, of which she approves, is the work of Hertzfeld, who is a man (Knauft 2006: 413). Repeated terms are middle, mid-level, middle ground, mid-range, and intermediate. This article strains to be mainstream. It expresses fear of theory but does not wish to be considered anti-theoretical. It generally rejects history. It appears that clear, accurate, and mindless competition is the model (autism). One must be careful not to tread on non-controversial views, except corpuses of contemporary work. Surely Peirce's fallibilism is far preferable to perfect middle cores. And here there is an example of the sanitizing of a rich field, losing the breadth of human culture. Indeed, in Knauft's writings, culture is no longer a noun, but a mild adjective. Since semiotic studies are inventing theoretical interpretations in the context of history, Knauft's careful method is far afield.

3.6. Dialogic anthropology and history

The Dialogic Emergence of Culture (ed. Dennis Tedlock and Bruce Manheim, University of Illinois, 1995) is a collection of essays based on Jakobson's and Bahtin's view that dialogue is a more fundamental form of speech than monologue. Language as a shared system is an emergent property of dialogue. "Once culture is seen as arising from a dialogical background, then language itself is renewable as an emergent cultural (or intercultural) phenomenon, produced, reproduced, and revised between field workers and natives. The dialogical ap-

proach amounts to a critique of expectation and of interpretive anthropology where the literal conversations are submerged between interpretants and already produced texts" (Tedlock, Manheim 1995: 2).

Jakobson argued that there is no such thing as individual speech without dialogue. Even inner speech "is only an elliptic and allusive substitute for the more explicit enunciated speech. Furthermore, dialogue underlies even inner speech" (Jakobson quoted in Tedlock, Manheim 1995: 7). Thus language as a shared system becomes an emergent property of dialogues rather than being granted ontological priority over speech (Tedlock, Manheim 1995:1). "Cultures are produced [...] in dialogues [...] shared culture emerges from interaction" (Tedlock, Manheim 1995: 2).

The dialogical turn was opposed to the separation of culture from language, but that separation, which began in 1940, only grew worse. In the post WWII period, the authors hold that "language came to be regarded as a secondary representation of independently figured social and cultural forms" (Tedlock, Manheim 1995: 6). White and Bahtin's observation that all discourse is "replete with echoes, allusions, paraphrasing, and outright quotations of prior discourse" (Tedlock, Manheim 1995: 7) has proved to be far more fruitful.

The introduction to *Dialogic Emergence of Culture* is followed by a collection of essays employing a dialogic model and concludes with a question and answer chapter considering interpretative culture while the notion of "text" is used in various treatments. Notably, the interpretative method of these studies does not employ the Tartu school's "text"[1] to any degree in its systematic method that raises questions of

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[1] Juri Lotman and his followers paved the road for new paths in contemporary semiotics, labelling their approach "semiotics of culture". A focal concept was the text and I pause here to introduce the background to this term. In 1962, Pjatigorskij defined the text as a variety of signals composing a delimited, autonomous whole. In the spatial sphere it must be fixed, in the pragmatic sphere the text has an inner structure, in the semantic sphere it must be understandable (Pjatigorskij 1971[1962]: 76). In 1970 Lotman described a culture as a "semiotic mechanism for the output and storage of information" (Lotman 1970: 2), and "a historical evolved bundle of semiotic systems (languages) which can be composed

many forms of signs, universals and underlying values, as does Lotman. Lotman began to perceive cultural behavior as text, not just linguistic behavior. "Text" includes the non-verbal sphere as well as language as quoted in Portis-Winner and Winner (1976), and it became a fundamental significant unit of cultural semiotic systems. Lotman agreed with Jakobson's position on the priority of dialogue which generates language on which the idea of semiosphere is based. "The ensemble of semiotic formations [...] as single, isolated language, is a precondition for its existence" (Lotman 1984: 16). "Dialogues [...] become one of the ontological characteristics of the semiosphere". "All borders", writes Lotman, are bilingual". Thus, concludes Lotman, "the elementary act of thinking is translation, and the elementary mechanism of translation is dialogical" (Lotman 1992: 143).

As far as it goes, Tedlock's and Manheim's collection uses a Bahtinian dialogic semiotic approach. It is a study of verbal behavior and does not consider all possible signs as does Peirce, nor the fact that there exist non-verbal areas of culture, and that sign-like systems exist among non-humans. Nevertheless this study carries us forward.

3.7. Sherry Ortner: *Theory in anthropology since the sixties*, comments about power by Eric Wolf

In general, the important issue of power in meaning and human relations is not sufficiently studied or taken account of. Lukes sees three dimensions of power (Lukes 1974 as summarized in Heyman 2003: 142): in the first one, one party gains the power in open confrontation; in the second dimension, the confrontation is not open, but the opinions of the two parties are conflicting; and in the third dimension

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into a single hierarchy (superlanguage) which also can be a semiosis of independent systems" (Lotman 1970: 8). As Lotman wrote, a semiotically evolved bundle of semiotic systems can be composed into a single hierarchy. Later he preferred the term "text" and introduced the concept of semiosphere, the widest area in which sign systems could be extended and could bring about a link to another plane, and semiosphere was followed by the biosphere.

of power, the governing party shapes the cultural and social framework so that the subordinates show positive support to the superordinates, in spite of their own aims. This last aspect needs to become more transparent for anthropology that studies the semiotics of meaning. As an example, Lukes analyzes various attempts to exemplify power, and particularly the devil and commodity fetish (a ritual) in South America (described in Taussig 1980). I have described Wolf's concept of imagination in the minds of subordinate power-holders (Portis-Winner 2006). In his *Envisioning Power*, Eric Wolf held that power "is an aspect of all relations of people." He argues that structural power makes some kind of behavior possible, while making others less possible (Wolf 1999: 385). Structural power steps outside the structure (Wolf 1999: 62). It is best seen in a historical, comparative method.

As I have written (Portis-Winner 2006), Eric Wolf calls for some interrelations between the fields of anthropology as early as his 1964 book, *Anthropology* (Wolf 1964), and repeated in 1974 with some sad reflection, writing that the state of affairs continues. Sherry Ortner writes in her article *Theory in anthropology since the sixties* (Ortner 1984) that she agrees with Wolf's position, and even refers to the past metaphor of the anthropologist Lowie, who described culture as "shreds and patches" (Ortner 1984: 126) Ortner believes that while anthropology was never united, it has devised some large categories of theoretical applications, arguments, and issues which she does not see as yet substantiated. This problem points to a fundamental gap between contemporary anthropology and the broad goals of the Lotman group. Eric Wolf (1964: 96) writes in his analysis of power, that "the anthropological point of vantage is that of a world struggling to be born". What is worth studying is human experience in all its variability and complexity. His aim was to set the framework bridging the humanities with anthropology. In his last book, he commented that such a synthesis had not occurred; rather there were growing schisms in the field (Wolf 2001: 11). In his preface to *Envisioning Power* (Wolf 1999), he held that human sciences were unwilling or unable to come to grips with how cultural configurations intertwine with considerations of power. He wrote that his aim was the

exploration of ideas and power observed in streams of behavior and recorded texts. In this pursuit he also wrote in a private communication that he wished to explore Peirce's third — unfortunately he did not live to carry out this task. He also brought to the fore the oft-neglected role of the imagination (Wolf 1999) as the formation of ideology in his discussion of the Kwakuitl, the Aztecs, and the Germans through the Nazi period.

Similar to Wolf, Ortner refers to an "apathy of spirit" since Boas (Ortner 1984: 127). The Boas school began as a revolt against past misunderstandings and issues concerning race and culture and mythological evolution. But on this basis, he called for a new spirit, where race, language, and culture should be reconceptualized, and where the art of indigenous Indian groups should be understood in their own right, styles, meanings. His approach was a combination of humanism and science. Ortner proposes to rescue anthropology from a post-Boas decline by introducing new key terms: symbol, action, or praxis. She states that three movements emerged in the sixties: symbolic anthropology, cultural ecology, and structuralism. She holds that Geertz and Turner were the leaders of symbolic anthropology. Ortner points out that Geertz's anti-theoretical bias and his limiting of the symbol primarily to its referential meaning (which I believe is not quite accurate) are opposed to Turner's position. However, Turner's symbols have many levels and meanings, including roles, religion, and beliefs, and Turner conceives of symbols as more dynamic than does Geertz (Ortner 1984: 129–131). In this sense Turner is closer to a semiotic approach. According to Ortner, Geertz did not analyze types of symbols and was not interested in ethos or culture embodied in public symbols, although he attempted to study culture from the native's point of view, but at times he confused his impressions with the values of the Balinese described. Geertz's approach was limited since it was not based on theory and action. I believe that his call for the native point of view, whether fully successful (which it was not), was his fundamental contribution to a more sophisticated awareness of internal or ethos meaning in culture and contributed to the semiotic effort to explore multiple points of view depending on the context of

the individual being studied. Margaret Mead had already contributed that anthropologists cannot avoid seeing a culture through their own cultural lens, thus she believed that the observers should try to account for this in their writings.

Ortner points out that Turner did not see society as harmonious integration based on symbols. Rather he saw actors as moving from one status to another, which she held was an active forerunner concerned with pragmatics. But she noted that both Geertz and Turner lacked sound theoretical systems (Ortner 1984: 131–132).

Other movements discussed by Ortner are evolutionary anthropology, ecological and adaption anthropology; she did not note that all of these are useful when not hampered by oversimplications and reductionism. According to Ortner, structuralism was invented by Lévi-Strauss (Ortner 1984: 135), which of course is not true. Structuralism was developed by Jakobson, Mukařovský and others in Prague, and was outlined in their notable thesis, "The Prague Linguistic Circle", and has unfortunately been confused with Russian formalism. Structuralism of the Prague innovation was a rebellion against Saussure's static linguistics and structuralism, since the Saussurean structuralism was not dynamic.

Ortner (1984: 141–144) also highlights political economy which she says sided with capitalism, with some exception as for example the work of Edward Said. Ortner believes, in agreement with Wolf's view but not his spirit, that by the eighties anthropology was disintegrating. But Marxist and political economists continued to dominate anthropology. She was apparently thinking of economic anthropology in this generalization.

As opposed to the disorganized state of anthropology, Ortner concludes by pushing a modern practice theory. The system of practice theory is explained as a seamless whole. According to Ortner (1984: 149), practice is the study of all forms of human action from a political angle.

Practice, then, is the key symbol of anthropology of the eighties. In spite of Ortner's long discussion of anthropological concepts and practices, there is no mention of what I have called the gap. Thus while

serious biological and physical scientists (and Lotman's semiotics of culture) were grappling with larger and unifying themes — dynamics of change and communication understood as applying both to the non-human and human world — anthropology for Ortner remains a particular form of praxis. This is not to say that Ortner has not commented on some important directions — e.g., by Vincent Crapanzano, Del Hymes, Victor Turner, and others. But her anthropology "since the eighties" leans towards a narrow path. We need a broader and more humanistic and scientific frame, which I shall try to point to as this essay continues. Thus Ortner's disappointing suggestions about the state of affairs from the sixties on are too limited to guide us to adventure into the broadest goals.

Part 4. Recent approaches in interpretation of signs

4.1. Geertz and relativism

Geertz's article *Distinguished lecture: Anti anti-relativism* (1984) is a defence of his brand of relativism. Here Geertz denies nihilistic implications, without making the argument for the denial. It seems that for Geertz relativism means a benign tolerance but its limits are not drawn in any clear way (1984). In Geertz's *Thick Description* (1973a: 5) his positions are well summed up:

> The concept of culture I espouse [...] is essentially a semiotic one. Believing, with Max Weber, that man is an animal suspended in webs of significance he himself has spun. I take culture to be those webs and the analysis of it to be therefore not an experimental science in search of law but an interpretive one in search of meaning.

Here the rejection of laws for interpretation both approach and distance Geertz's *oevre* from Lotman's semiotics of culture. Geertz concludes his 1995 study with yet another metaphor, this one borrowed from Bruner's *Acts of Meaning* (1990: 150), a comment on the most famous Sanskrit drama, Kalidasa's *Sakuntala*, where the sage

does not recognize the elephant, only its footprint after the elephant has left, from which he concludes that an elephant had been present (Geertz 1995:167). Geertz remarks that "ethnographic anthropology is like that; trying to reconstruct elusive, rather ethereal and by now wholly departed elephants from the footprints they have left on my mind" (Geertz 1995:167).

Geertz sees this as a critique of post-positivism (Geertz 1995: 167–8). This metaphor brings to mind Peirce's example of an index (the footprint), but for Peirce the index is not isolated. It means binarism whether the index is contiguous with its object or operates on the principle of *pars pro totum*. The index for Peirce does not refer to something wholly departed and indeed if the sign is fulfilled it leads us to thirdness and the symbolic level. In a sense Geertz gives up the battle by assigning ethnography to individual fictions, and facts to mere traces.

While Geertz reminds us (1973b: 448–9) that various notions of "text" since the Middle Ages have freed the term from the confines of scripture and writing, allowing us to see all culture as an "assemblage of texts". Geertz's idea of "text" remains additive and theoretically underdeveloped, and thus "the more profound corollary, as far as anthropology is concerned, that cultural forms can be treated as texts, as imaginative works built out of social materials, has yet to be systematically exploited" (Geertz 1973b: 449). However, the concept of "text" was at the time being thoroughly discussed by the Moscow-Tartu group.

For Geertz, the purpose of interpretation of culture, or penetration of a text, is limited to discovering its social semantics, and Geertz is not concerned with underlying theoretical organizing principles such as values, norms, world views, or structures, and in fact he dismisses the whole area of syntactics as a subject of investigation. Accordingly, in his *Thick Description* (Geertz 1973a: 10) Geertz maintains that, "Once human behavior is seen as symbolic action [...] the question as to whether culture is patterned conduct [...] loses sense".

In Geertz's later work, *After the Fact: Two Countries, Four Decades, One Anthropologist* (1995), anti-system and relativistic persuasion

predominate, as do cultural performances seen as narration of stories, which was his concluding affirmation in his notable *Notes on a Balinese cockfight* (Geertz 1973b). As Geertz puts it in his *After the Fact*, "One is faced [...] with a confusion of histories [...] There is no general story to be told" (Geertz 1995: 2). More specifically, he states that "Floundering through mere happenings and then concocting accounts of how they hang together is what knowledge and illusion consist in" (Geertz 1973a: 3). In his *Imaginative Horizons,* Crapanzano (2004: 87) decries the resulting emptiness of Geertz's "floundering", and comments that "Ironically [...] the denial of the possibility of a 'real' mimetic account, of any master narrative [...] does in fact announce an overarching master narrative — a consuming obsession with artifice".

4.2. Turner and performance anthropology

A key issue in Turner's anthropology of performance is his intense interest in the inner life of the subjects he studied. He stresses the symbolism not only of objects but also of social dramas the roots of which he sees in Greek drama (Turner 1982: 11–12). Turner extends Van Gennep's concept of the liminal to his own liminoid, which refers to the carnival atmosphere in complex societies. Here he is clearly influenced by phenomenology and by Dilthey and prefers the idea of a hermeneutic spiral to that of the circle. His use of montage suggests Jakobson's metonymic metaphor and Turner's social drama, which was of formative importance based on process and dynamics, and suggests Crapanzano's scene, which I discuss next, as well as Bahtin's study of medieval carnival. Turner's complex use of symbols in his study of the Ndembu and other works fundamentally influenced the anthropology of meaning where symbols are immersed in rich rituals and traditional context and beliefs, conscious or subliminal. Turner does not use the concept of "text", nor does he suggest a system beyond interpretation.

4.3. Syncretism and the role of imagination

I turn now to Vincent Crapanzano's *Imaginative Horizons: An Essay in Literary-Philosophical Anthropology* (Crapanzano 2004), which echoes Wolf's plea (1999) for attention to that almost limitless factor, imagination. The book opens with a quote from Joseph-Marie de Gérando. Gerando wrote that "The imagination is the first faculty that one must study in the savage because it is the one that nourishes all the others"; it is the "first faculty to develop in the individual" (cited from Crapanzano 2004: 7). The collected lectures are devoted to cultural creativity and the particular tensions that are involved in cultural creativity which according to Crapanzano American anthropologists have avoided (with the possible exception of Kroeber). Rather they have spoken in an often "deterministic fashion, of invention, adaptation, syncretism, cultural change, development, and evolution" (Crapanzano 2004: 1). Crapanzano holds that American anthropologists are "more concerned with the products of imagination than with the process of imagination, and that the individual has been slighted" (Crapanzano 2004: 1). He employs Bonnefoy's image of the "arrière-pays" (Bonnefoy 1982; in Crapanzano 2004: 2) the hinterland, as a kind of governing trope. Crapanzano looks at openness and closedness and how we construct horizons that determine what we experience and interpret.

Crapanzano's interest is in fuzzy horizons, "auras" that "always accompany experience and resist full articulation" (Crapanzano 1992a: 2). Once the horizons are articulated they freeze our view of reality "fatally", were it not that a "new horizon emerges and with it a new beyond" (*ibid.*), followed by a new horizon, suggesting the aftermath, the less violent version of Lotman's explosion. The dialectic of openness and closure haunts Crapanzano. In the book just quoted and an earlier one, *Tuhami* (Crapanzano 1980), he feels that the attempt is to unmask the ways that ethnographic writings leave their imprint on supposedly objective data, and he considers how power and desire affect ethnographic writings. His books (Crapanzano 1992a; 2004) "play with form and subject [...] and create [...] disquiet [...] and a

kind of turbulence in the reader" (Crapanzano 2004: 3). In *Imaginative Horizons* montage juxtaposes the unexpected ethnographic description with romantic poems (*ibid.*). The aim is "to destroy prejudices, [to] open horizons, and promote creative thought and action" (Crapanzano 2004: 3). Thus the penchant of humans "to reduce the strange to the familiar, the exotic to the banal, or *in extremis* to eliminate the strange, the exotic and the foreign by violent means" is critiqued (*ibid.*). He holds that "the reductions are all too often facilitated by academic disciplines that do so uncritically in the name of one science or another" (*ibid.*).

Crapanzano does not oppose scientific approaches to anthropology as long as they meet appropriate epistemological and methodological standards and acknowledge moral and political implications. But he critiques anthropological approaches and other humane sciences that model themselves on some other science, the subject of which is radically different from that of anthropology. Additionally, narrow anthropologies leave out what may be the most vital. He holds that anthropology has a moral charge: if we dismiss everything a people holds important and reduce their culture to ecology and adaption, or cognitive or genetic or evolutionary schemes, and we promote our own parochialism, we devalue those we study. Also important is what these people say about us. He accuses Americans of complacency arising out of "studied ignorance or indifference" and argues that "anthropology should always be pluralized" because it is essentially "an interstitial discipline" (Crapanzano 2004: 5).

Crapanzano believes his montage design rescues the importance of the individual perspective, for a focus on the general has resulted in distortion, simplification, and determinisim, and has led to the ignoring of imaginative play, creativity, transgressive possibility, and human freedom. He mistrusts both sociological and psychological explanations, considering them as just-so stories or ideologies that offer comfort when we are faced with the confusing, the puzzling, and the "seemingly unknowable" (Crapanzano 2004: 6). He prefers the puzzlement of the montage to easy explanations, process over topography, the temporal over the spatial.

Each chapter is introduced by a quotation that presents a theme of imagination (body, pain, hope, memory, trauma, transgression, or death). Such underlying discontinuity and disjunction cast in a poetic dimension is often ignored in ethnography. We do our best to deny the high stakes in interpretation, he writes. For example, there is the US-Iraq war, where one response to the challenge is the obliteration of those who pose the challenge. "Despite the [...] reality of terrorism, weapons of mass destruction, oil interests, and paranoid personalities, the projected war is also a *Kulturkrieg*" (Crapanzano 2004: 11).

For Crapanzano, the objective is enveloped in the subjective understanding. He calls for "self-critical reading understood both literally and metaphorically that resists full closure" (Crapanzano 2004: 11). It is the frontiers as horizons extending into the space-time of the imaginary that fascinates us. Thus he sees imagination through a trope — the *arrière-pays*, the *au-delà*, and *ailleurs* — recalling Yves Bonnefoy. Crapanzano translates *arrière-pays* as hinterland, meaning background, a land or places that are simpler, that are beyond where one is but that are intimately related to where one is. The beyond is like shadows; the beyond slips away only to reappear just when we thought we had rid ourselves of it — reminding us of the literature of Proust, Peirce's infinite regression[2], and the novel *Snow* by Orhan Pamuk.

Crapanzano takes us into imaginative vistas never ending. He adds, in his poetic view, whole dimensions more to culture than others have grappled with, but compares with Eric Wolf's imaginative ideologies, and Orhan Pamuk's imagination of other worlds.

Like Peirce, Crapanzano holds that although dialectical models of self-constitution conceptualize the process in dyadic terms as between self and other, such models must be understood "in triadic terms". He

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[2] Peirce defined the sign as something which stands to somebody for something else. The sign was composed of a first, iconic (similarity, artistic), a second, index (contiguity, struggle), and a third, symbolic, in which the relation to the object is conventional. All three levels compose the symbolic sign, which was hardly limited to its referential meaning. Peirce's third, or context, was ever present and was of the order of rules, norms, traditions, ways of perceiving time and space, basic values, and as such, poses some similarities to Crapanzano's "background".

states that the Western characterization of the self reflects our strong emphasis on the referential role of language at the expense of the pragmatic (Crapanzano 1992b: 94–95), and notably, at the expense of the aesthetic and the metalevel of analysis. Crapanzano finds that ascriptions of the self and other can be metapragmatic ascriptions that describe pragmatic features and are expressed metaphorically. The term meta-pragmatic and the problem of higher semantic authority in a dialogue were Bahtin's innovations and were then taken up by Crapanzano.

Like Bahtin, for Crapanzano, all ascriptions of self and other have a commenting and double role. Frequently, in dual, multi-ethnic cultures there are strange juxtapositions where the trope to be read suggests Bahtin's dialogue, Lotman's montage and Jakobson's montage and metonymic metaphors. It also echoes Peirce's auto-communication, exemplified by his story of the child who unwittingly touches a hot stove and learns that non-ego is signaling to ego — and is the sign of consciousness of self as other, in other words auto-communication.

In his afterword to Manganaro's volume, Crapanzano holds that "the post-modernist proclamation that master narratives are dead [...]" puts "into question the taking of (and justifying of the taking of) an extra-textual stance of accepting the narrative" (Crapanzano 1990: 303).

For Crapanzano a focal issue today is the fate of the authoritative function which he calls the Third. Crapanzano sees this function as a guarantee of meaning mediating any interlocution and as technically being a metapragmatic function and clearly not mere fiction.

> The Third may be symbolized [...] by such notions as the law, conventions, reason, cultural tradition, language, [etc]. It may be embodied by father, king or priest [...] by spirits, deities and even by a third person (the audience) in any dyadic exchange [...] When the Third is simply an empty function, there can be no communication (Crapanzano 1992b: 90).

Here Crapanzano invokes Peirce's mediating Third, the symbol which is never empty but is based on reflection and relationships and also

invokes Bahtin's "double-voiced words", where the speaker inserts a new semantic orientation which already has — and retains — its own orientation (Bahtin 1981: 156 in Crapanzano 1992b: 93). Crapanzano notes that where the commitment to the egalitarian pretense is very strong, it well may be that no participant to the exchange may willingly admit that his recontextualizing response to the other has higher semantic authority. It is this meta-parodic situation that resembles the discourse of the post-modernist's postulates (Crapanzano 1992b: 94). Such parodic situations are pertinent also to present-day politics. For example, under communist regimes, in Poland, there was an active dissident industry studying "double speak" — the unmasking of the double meaning and egalitarian pretense conveyed by official statements. Indeed, notes Crapanzano, traditional empirical approaches have ignored the mutual change that occurs in a dialogue (Crapanzano 1992b: 98).

Crapanzano asks what is happening today to memory, and by extension to history; and does not this vacuum lead to the defenselessness and even attraction to fundamentalism (Crapanzano 1992a: 99)? He leaves us with the question whether we can recapture the Third and, drawing on Benjamin, Crapanzano asks if one erases but does not expunge, would this erased miracle be the return of the Third, our western hegemony — and the capacity to escape meta-parodic indeterminacy by knowing whose parody is empowered (*ibid.*)?

Crapanzano's *The scene*

Crapanzano writes that he explores the relationship between objective paramount reality and its subjective, shadowy world, "edging on the imaginative, which I call the scene", suggesting the two interplaying realities and "our present take on the 'empirical' has led us to ignore this dimension of experience" (Crapanzano 2006: 387). He calls attention to the "intersubjective nature of subjectivity itself and offer a preliminary attempt at understanding the complex interlocutory-the indexical-dramas occurring in ritual, for example, psychoanalysis and

anthropological research, that constitute the scene" (Crapanzano 2006: 387).

He finds that we ignore or reject the romantic or "the 'subjectification' of the putatively objective contexts [...] of the phenomena we observe" (Crapanzano 2006: 388). He differentiates between objective reality and what he calls the "scene". Crapanzano argues that "subjectivity [...] is essentially intersubjective", mediated through language and immediately through encounters (Crapanzano 2006: 389). The scene colors and intones the objective. It is the objective reality that gives us epistemic if not ontological security. We could speak of the scene, says Crapanzano, by analogy with double-voicing, as double sighted, like suggested by Bahtin's world. How the scene is framed by the situation in which one finds oneself affects how one responds to it or even ignores it (Crapanzano 2006: 389).

Crapanzano (2006: 392) describes a communion service in an evangelical church, a ritual that he compares to Turner's (1974: 94) *communitas*, or Durkheim's social effervescences at the core of primitive rituals. Crapanzano suggests such rituals express loneliness (as opposed to *communitas*). Ritual studies may be felt as miraculous, mystery, and the uncanny having no real referent. Crapanzano, being a rationalist, needs to account for the miraculous. He stresses that "the paradoxical relationships between contingency and repetition — a repetition that both enhances the contingent as it disarms it" (Crapanzano 2006: 394). He argues that one finds oneself in the synchronic present and the diachronic past "that affords interlocutory possibility" (Crapanzano 2006: 395). Here I see reverberations with Jakobson's metonymic metaphors (continuity, metonymy, and repetition) while metaphor is the rejection of the dichotomies of synchrony and diachrony in favor of similarity (Jakobson 1960).

Crapanzano asks why we cling to empirical reality, "why has *that* reality become the bulwark of an epistemological discipline that, despite its rejection of any ethical foundation, is carried out with such moral rigor" (Crapanzano 2004: 398)? He explains that he is not making a plea for the irrational but rather "for an opening of our empiricism to include within its purview the irrational — the less than

rational" (Crapanzano 2004: 396). Crapanzano explains how do "interlocutory exchanges precipitate the scene, if not paramount reality [...] the relation between scene and reality". (Crapanzano 2004: 398) In many cultures memory and reality are conceptually confused but latent interlocutors are never wholly absent (Crapanzano 2004: 399). "There are times when the indexing of the scene may so mask the indexing of paramount reality that reality slips away" (*ibid.*).

In Crapanzano's words, "We should discuss the social construction of the way scenes and realities are related or not related to one another" (Crapanzano 2004: 398). We need to consider the way "in which interlocutory exchanges precipitate the scene and [...] the relationship between the scene and reality" (*ibid.*).

He asks how scenes and paramount reality are constructed. The answer is that it is the result of indexical play between interlocutors, which can be a struggle, and may include memory. Such scenes also index the context. The indexical may be double since it points to what it is, the context, but also to what it is not — the reality — indexing reality slips away. The intersubjective analytical third means that two interlocutors become subjectively united (Crapanzano 2004: 402). Crapanzano does not attempt to propose underlying values that may have universal application, as does Lotman. Nor does he deny the issue. But his relation to Lotman's later works, possibly intertextual, is marked and of great interest.

Crapanzano's references frequently to psychoanalysis. His Third, is clearly a broader aspect of Peirce's Third, with all its varied meanings that rule or control the meaning of signs (Crapanzano 2004: 400).

Part 5. The post-modern detour

5.1. What "post-modern" means

Bidney rejected total relativism regardless of how difficult and unsuccessful is the search for universals. However, this post-modern view leads us to the general questioning of traditional methodology. The post-modern trend in ethnology had its beginning, some say, as early as in the sixties (Rabinow 1986). There is one area at least upon which there is general agreement, namely that post-modernism is a reaction to the disillusionment of modernism with the rationalism and optimism that has dominated Western thinking since the Enlightenment and the sense that accurate representations are not possible. They are infected with and rooted in relations of power. But such a negative view is not shared by the semiotic world. Accurate representations are imperfect but the goal is not impossible and should be a central aim.

What post-modernism means is a reverberating question, and in a positive sense it directs us to a questioning of ethnological methods, alerting ethnologists to the fact that they are writing stories, and that the written narrative cannot directly mirror the raw data since it is infected with the ethnologist's own perspective, and furthermore from the point of view of the actors themselves there is never a unitary point of view or voice, which is also the message of Bahtin's heteroglossia.

One effect has been the severe reassessment of the writing of ethnology itself (Clifford, Marcus 1986). Some go so far as to advocate that writing relies on self-critical reflexivity, free floating signifiers loosened from their signifieds, pastiche, montage, tropes, dialogue, heteroglossia, quotation, traces, as opposed to history or memory or even nostalgia. Additionally, important to post-modernists are the notions of meta-commentary, allegory and irony, critiques of other ethnological writings, revised conceptions of the other as a dynamic part of the depiction, and avoidance of an absent ethereal voice, reliance on rhetoric and also on a journalistic mode. But this raises the problem that ethnological studies are seen as a kind of fiction, as

plotted narratives and thus relative and unique. Then comparisons between cultures (one of the guide posts of anthropology) are not useful. Rabinow (1986) and Crapanzano (1990, 1992b) reject the reduction of ethnological studies to fiction, rhetoric, or journalism, and insist on inclusion of context, history, and power relations. They reject total relativism that rules out even the most abstract invariables and thus the view of incommensurability of cultures.

The journal *Cultural Anthropology*, founded in 1986, opens with the following remark by its editor, Marcus (1986: 3): "A *particular* model of theory and practice has been disrupted — that of the paradigm, described by Thomas Kuhn, in which research proceeds under a regime of a recognized set of problems and networks". While Kuhn's insights into the difference between cultural paradigms are very valuable (Kuhn 1996 [1962]), he also falls into the trap of incommensurability since each paradigm is viewed as unique and having nothing in common with its part.

In his introduction to *Perilous States*, Marcus (1993: 1) calls for a manner of writing more evocative of journalism. He is concerned about the ferment in cultural studies, and is searching for new and immediate ways for contact and understandings, and contrasts his suggestions with what he calls "text-based practices of analysis, preferring a more immediate form of reportage since such a mode, he senses, will also address the documentary impulse of cultural studies with its hypercriticism of representation (Marcus 1993: 3). Thus Marcus believes that he is escaping from textualization and that anthropologists' tendency to rely on "rational, detached reflective reason" hinders "more direct access to other's situated frameworks and discourses" (Marcus 1993: 4). However, a semiotic approach to culture, diverse as it is, takes a distinct path from past evidence. It does not reject history, reason, rationalism and detached reflective reason, and defends direct access to data.

The following are some remarks by Crapanzano about the post-modern position. The post-modernist prediction that meta-narratives are dead does not prevent from taking an extra-textual stance. "It does put into question the taking of an extra-territorial position of

accepting the narrative" and "[...] the move to the meta level is [...] the foreclusion [...] of the purported subject matter of the commentary" (Crapanzano 1990: 303). The original subject, in this view, "becomes an empty signifier that serves a pragmatic function — the preservation of the metaframe, or, in the now fashionable questioning of that frame, the metaframe" (*ibid.*). Going farther, Crapanzano observes that the writing school of ethnography has created or conferred its own canon (Crapanzano 1990: 303). For the dichotomy fiction/nonfiction is itself a historical and culturally specific opposition involving particular notions of narrative and representation. Ethnography is not simply description but is comparative. It has a creative and epistemological effect (Crapanzano 1990: 305) and the ethnographer may be likened to a trickster without the modernist irony (Crapanzano 1990: 306). Abandoning the ethereal authority in experimental ethnography is only an illusion. "It has its own appeal. It precipitates (its) reality. Text and reality are always implicated in each other and appropriate anthropological distance must be maintained" (Crapanzano 1990: 307). Crapanzano's analysis of reality and rejection of total relativism echoes the mind-set of Searle, Lotman and his group.

As Crapanzano comments, the "barren artifice" as is invented by the post-modern writers is structured like parody and argues it "both incorporates and challenges that which it parodies" (Crapanzano 1992b: 87–88). He notes that most post-modern definitions are vague, contradictory, and general (Crapanzano 1992b: 88) but they frequently stress reflexivity carrying this position so far that there can be no external vantage point. "We are caught within the play of arbitrary signs that are loosened from their referents and no longer systematically constrained by grammars of style, say, or narrative. [...] The concatenation of signs becomes an ironic montage (Crapanzano 1992b: 88).

5.2. Searle's critique of post-modernism and relativism

In his book, *The Construction of Social Reality* (1995), the philosopher John Searle analyzes reality, questioning the post-modern critique of

cultural research. Searle considers the status of objective facts that are only facts by human agreement, existing only because we believe them to exist, to be real, not fiction. A five dollar bill, a piece of property that we own, are some examples, in contrast to Mt. Everest, the existence of which is independent of human experience. Thus institutional facts, dependent on human agreement, are contrasted to non-institutional facts, namely brute facts.

Searle (1995: iix) wishes to defend and further the position that there is a reality totally independent of us (Searle 1995: 2). He abandons dualism of mind/body. Mind is a higher level feature of the brain and is both mental and physical. Culture is constructed of nature. Searle distinguishes reality from theory of truth which is a complex, philosophical argument based on his theory of correspondence which we cannot outline here. Lotman also grapples with what Searle calls truth, how the brain functions, and how it relates to concepts of time and space and worldview. Searle explains that with consciousness comes the possibility of intentionality — that is, the capacity of the mind to represent objects and states of the world other than ourselves (Searle 1995: 7).

Searle's concept of "background"

The concept of "background" for Searle refers to the set of non-intentional or pre-intentional capacities that enable intentional states to function. "The key to understanding causal relations between structure of the background and structure of social relations is to see that the background can be causally sensitive to the specific beliefs or desires or representations of those rules" (Searle 1995: 141). "Background" can be compared to Crapanzano's "scene", since here, too, memory and background are causative and knowledge and abilities that are generally known are not part of intentionality "but are the necessary preconditions for the functioning of intentional concepts" (Searle 1995: 133). Background functions in facilitating linguistic interpretation and perceptual interpretation that are extended to

consciousness. According to Searle "the understanding of utterances and the experiencing of ordinary conscious states requires background capacities" (Searle 1995: 135). Crapanzano shows that from background to intentional states it is not necessary to involve rules since the latter may be unconscious dispositions. This general view of the flexibility of rules may be related to innovative and creative behavior about which Searle hints in some comments in his book.

This is a defense of context and unconscious underlying norms or dispositions that are formative in creating culture. Those who do not agree with the autonomy of cultural realism, and who hold that reality is but a social construct such as anti-realism, versions of post-structuralisms, deconstruction, according to Searle, are taking positions against all common sense views (Searle 1995: 15).

Searle's importance for culture is the systemic support of the social reality that cultural system, beliefs, and norms share, as opposed to the post-modern position that such cultural habits and practices are pure constructs. Lotman's and Wolf's positions are of course congruent with Searle's, as is also Crapanzano's emphasis on imagination and the aesthetic that also have a place in cultural reality. This leaves the question of the individual creator who is not understood perhaps even in his lifetime, but understood long after. We must assume that the individual creator is constructing some aspects of social reality for the future if his creation is eventually to be understood and interpreted by some other.

Part 6. The semiotics of culture and its roots and evolution in the 21st century

6.1. Boas as the beginning and his unending relevance

To set the parameters, I quote Baker's view that Boas took us out of the ivory tower. Baker discusses the ways Boas' writing and research a century ago is being deployed and used in today's "public arena" (Baker 2004).

I look at Boas as a crusader unlimited by time-based chronology and by space. I also consider Boas' import as largely misunderstood even today as he does not receive the attention he should. He was at home in all fields of anthropology and more. In his book, *Change in Bodily Form of Descendence of Immigrants* (Boas 1912), Boas demonstrated that head size was significantly determined by environment (Stocking 1974: 180–90, cited in Baker 2004: 1). Boas' ideal laboratory was the diversity of immigrants and their exclusiveness as workers in Manchester's factories. Although he was attacked for this finding, holding that the results were genetic, Boas' findings have been established as correct.

In spite of enemies and popular anger, Boas succeeded in presenting a paper at the 1911 AAAS, entitled *Bases of Primitive Man* where he held that there were no pure races, and intelligence tests were fallacious and misleading. He also demolished "false arm-chair" evolution in relation to art and language. He fearlessly destroyed anthropological myths and showed that his empirical method demonstrated facts as opposed to fairy stories. He did not uphold static theories and held that events moved with the times. American anthropology began in a hectic mantra, and Boas' path-breaking positions are important today and have no end. Though he was incorrectly criticized as being anti-historical and anti-theoretical this was not at all justified. His *Mind of Primitive Man* (1911) and *Primitive Art* (1927) have become classics. He held that art in various forms was universal and he did not move on linear evolutionary tracks. Similarly, Levi-Strauss found that science in primitive societies was also universal but did not follow an exact path and was based on local factors in the environment and bricolage, simply what was available to the creative mind.

After Boas as well as his leading students, Benedict and Mead, there was a period of general neglect of its famous founders. Since anthropology settled down to descriptive and incorrect evolutionist theories, with the partial exception of Kroeber, following the Boas period, there was a general fragmentation and decline in anthropological scholarship, but later also some explorations and new direc-

tions, which I have described (Geertz, Crapanzano, Turner), and which suggest interrelations with semiotic approaches.

I turn now to some fundamental concepts of semiotics of culture and recent developments in semiotics.

6.2. Deely sees semiotics for the twenty-first century

His study outlines

> A unified treatise laying out the basics behind the very idea of semiotic inquiry in general, a treatise providing a map of semiosis as an integral phenomenon (it being understood that semiosis is but the name for the action of signs, which provides the common subject matter for the whole range of inquiries covered by the umbrella term "semiotics" (Deely 1990: xxix).

Kull (1990: ix–xxv) quotes Deely who states that knowledge is definitely in the twenty-first century in the post-modern age. Kull points out that semiotics may be defined in multiple ways. He traces historical developments before Peirce and Jakob von Uexküll and important earlier traces. According to Kull, Lotman believes that semiotics is not meant for those not familiar with some other field of study. Some see semiotics as binding together the methodologies of the humanities and all theoretical bases for all qualitative approaches and as the emperor of all quantitative science such as physics.

The Theses on the Semiotic Study of Cultures as applied Slavic texts (Uspenskij *et al.* 1973) which laid out broad new programs of the Lotman group, outlined the development of semiotics toward diversity and heterogeneity (Uspenskij *et al.* 1973: 4). It contains the following formative statement:

> The pursuit of heterogeneity of languages is a characteristic feature of culture. Heterogeneity, in its turn, enables us to perceive scientific analysis not just as departing from a single unified viewpoint, but as consisting of a system of perspectives within which each scholar who studies culture has to start by explicitly identifying his or her point of

> departure. The disciplines and scholars studying culture therefore constitute a heterogeneous collection of viewpoints within which efforts have to be made in order to relate different perspectives to one another, to allow them to interact and to unify them methodologically. As a semiotic system, research will at some point develop a need for a generalized description of itself. (Uspenskij *et al.* 1973: 20)

In Lotman's words, "The highest form of structured organization of a semiotic system is the phase of self-description. The process of description itself completes structural organization" (Lotman 1996: 170). If this structural organization does not cause stagnation, but retains its natural diversity and prospects for further development, as exemplified by Deely's book, then organization means movement towards understanding and change.

In his article *Humans and signs* (1969), Lotman writes the following:

> It [science] often takes that what seemed so simple and clear and discovers complexity and uncertainty there. Science does not always make the unknown known, it often behaves in a completely opposite manner. In the end, science does not always aim at providing as many answers as possible, instead if departs from the assumption that the right way of posing the question and the correct course of argument embody greater value than ready-made answers even if they are right but have not been controlled (Lotman 1969: 6).

The article concludes with some semiotic issues. Following Peirce's idea of synechism, semiosis can include lifeless processes according to Deely (1990), reflecting emergence of later scientific theories beyond Peirce's lifetime and discussed by Eco and Sebeok, holding that this discussion must be left open (Lotman 1969: 4).

This discussion leads us to touch on biosemiotics which I only briefly describe since it is beyond the purview of this study, but which is ineluctably a part of semiotics of the hemisphere so I digress here to look at this issue.

6.3. Global semiotics, biosemiotics

The concepts of the semiosphere and of global semiotics according to Kull, Petrilli and Ponzio and the implications of Lotman and Deely, bring us to the complex area of biosemiotics. What is biosemiotics? Hoffmeyer writes:

> It was only in the last decade of the twentieth century that the words began to proliferate in the international literature (Sebeok and Umiker-Sebeok 1992). *According to the biosemiotic perspective, living nature is understood as essentially driven by, or actually consisting of, semiosis, that is to say, processes of sign relations and their signification — or function — in he biological processes of life.* (Hoffmeyer 2008: 4)

According to biosemiotician Claus Emmeche:

> Biosemiotics proper deals with sign processes in nature in all dimensions, including (1) the emergence of semiosis in nature, which may coincide with or anticipate the emergence of living cells; (2) the natural history of signs; (3) the 'horizontal' aspect of semiosis in the ontogeny of organisms, in plant and animal communication, and in inner sign functions in the immune and nervous systems; and (4) the semiotics of cognition and language. (Emmeche 1992: 78)

Thus, signs do not distinguish between nature and culture. Living systems originate in molecular processes but molecular processes cannot be exhaustively described in chemical terms. This position is anchored in the evolutionary philosophy of Peirce. There is the issue of whether lifeless phenomena are also a part of the semiosphere which is debatable (Hoffmeyer 2008: 5).

According to Hoffmeyer, early advocates of biosemiotics investigation also included Jakob von Uexküll (1864–1942), and to some extent concepts of Bateson (1904–1981).

The article *Bioethics, semiotics of life, and global communication* by Augusto Ponzio and Susan Petrilli (2001) proceeds to other dimensions. We see the extension of semiotics to the global sphere, we "must accept the responsibility of denouncing incongruities in the global

system, any threats to life extending over the entire planet inherent in the system" (Ponzio, Petrilli 2001: 263).

According to Ponzio and Petrilli, bioethics belongs to two totalities (Ponzio, Petrilli 2001: 263), the semiosphere and global communication, and the biosphere. The writers call for viewing bioethical problems in socioeconomic contexts that is global communication production (Ponzio, Petrilli 2001: 263). They extend Lotman's semiosphere to include the biosphere, or semiobiosphere, and semiotics of life (Ponzio, Petrilli 2001: 264). They see globalization as tantamount to heavy interference by communication and production to life in general (Ponzio, Petrilli 2001: 268). It is destructive (Ponzio, Petrilli 2001: 269). They outline the now well-known deterioration of the riches of the planet, the dangers of human life.

Petrilli and Ponzio have written widely on semiotics of culture expanding on the thesis of semiotics of life, carrying semiotics to a new level, that of relevance and application to the world, ethics and political consciousness, and this must be continued. This is a most important contribution. We need to view bioethics in the context of global production and communication. They are related from the point of view of ethics. They point to the destructiveness of the universalization of the communication in the production system market which impedes and distorts communication. It destroys traditional cultural practices held in the way of development. This article brings up the problem that ethics cannot be limited to exploitation and economics, but mental suffering, including the effect on the arts and literature.

1. Kalevi Kull

Kull in his article *Semiosphere and the dual ecology* (2005a) compares two types of sciences: semiotics and physics. Physics studies a single, physical reality repeatedly and whereas there are many semiotic realities that are looked upon as brought upon by one individual, they are unique. The semiosphere is defined as the space of qualitative (in-

commensurable) diversity (Kull 2005a). Therefore, there is a paradox. Diversity, a creation of communication, can also be destructive to excessive communication. Kull quotes Hoffmeyer (1999: 153; in Kull 2005a: 176), "model building is at the core of semiotics and natural sciences. Models are the sum of their building blocks but are [...] complex signs occurring in organisms". Kull argues that "understanding from a semiotic point of view [...] requires instead a continuous interchange between contradicting models" (Kull 2005a: 176).

There is a problem, however, with this position since cultures may be partially incommensurable but hardly entirely — which is one of the basic studies in ethnology. The underlying unities may be too abstract for sign theses but nevertheless, they must be investigated. The solution to the paradox is in Socrates' dialogue, Kull argues.

Kull tells us that according to Lotman's formulation, there is always more than one text and more than one code. Code duality is a basic feature of the semiosphere, a term that refers to "the space of meaning generation" (Kull 2005a: 177). There is only one way to create meaning and that is via multiple simultaneous descriptions (Kull 2005a: 177). Semiosphere is the region of multiple realities and multiple worlds (Kull 2005a: 180) that together form one single reality. Both physics and semiotics are types of descriptions (Kull 2005a: 182). Both aim to study everything in the world and any phenomenon can be studied both physically and semiotically. Semiotics is the study in terms of semiotic space and emerging meanings (Kull 2005a: 182).

2. Diversity

Kull argues that following Gregory Bateson, information is "difference that makes a difference. Semiosphere is where distinctions occur or where distinctions are made. Thus, semiosphere is the space of qualitative diversity" (Kull 2005a: 179). One difference between the human and the non-human world is the interest in survival. Organisms cannot be aware of their own death (Kull 2005a: 185). Com-

munication is the creation of diversity, but too much communication leads to the loss of diversity (Kull 2005a: 186).

Diversity is the power of evolution. Thus, according to Kull's *Semiotics is a theory of life* (2005b), biosemiotics as an approach to the whole living world begins with Darwin's *Origin of Species* (1859) but it has medieval roots. He replaces Darwin's model of the tree with a new model — the web model (von Uexküll, Wesiack 1997).

In Kull's *Copy* versus *translate, meme* versus *sign* (2000), Kull shows that biological events at the lowest common denominator are not static. As opposed to standard copying in biological genetics, biological development involves change in usage of the gene (Kull 2000: 4). Epigenetic can be first and gene shift follows. This is not natural selection, since the organism itself selects the appropriate genetic functional genome which will be later fixed by stochastic genetic processes (Kull 2000: 4). Kull writes that according to Stanley Salthe and David J. Depew, development, not evolution could be considered as the central framework as biology; natural selection contrasts with evolutionary development.

3. Translating or interpreting the genotype

As Kull continues, if the phenotype is further used for production of the next genotype, then the phenotype is a process, a developing organism. "The genome does not *determine* the phenotype, but [...] the organism *interprets* its genome when producing phenotype" (Kull 2000: 7). Emergences of new features of organisms can appear due to changes in inheritance or system or environment. It is not DNA that specifies the feature of the organism. Identical DNA may vary in gene expression (Kull 2000: 4). This is a far more dynamic turn on the traditional genetic system contributing to complex change which is central to semiotics of culture. Bringing the discussion into the domain of semiotics of culture and discussing Lotman, Kull contrasts the non-textual and the textual approaches (Kull 2000: 10). Text is not a structure but a process, and has semiotic features more fundamental

than a message, which could at times be just simple organic or inorganic molecules. Historicity, intentionality, and intertextuality are features of all texts. Signs are seen as living entities and semiosis is identical to the process of living. Sign or text is always connected to a living system. Culture is a living system. Culture is also a text, according to Lotman, but never a single language. Culture is composed of a complex of texts (Lotman 1984).

Memes, copying a term used by Peirce, are degenerate signs. They can only be copies. Objects of copying are memes. Objects of translation are signs. Darwinian fundamentalism, according to Steven J. Gould, is neo-Darwinism. We need both sides — natural selection biology (copying) and semiotic biology (translation). There is no border between the semiotic and the non-semiotic world. The aim is to find steps between the worlds. Signs grow. Living systems have "aliveness".

6.4. Concluding remarks — Lotman the Maestro

Torop's article (2005: 159–170) on the semiosphere contains much information about Lotman's book, *Culture and Explosion* (2009), which has just become available in English. I will discuss what we know about Lotman's last book in reviews and quotations as stated in Torop's article, as well as comments in other Lotman publications. Torop holds that "The Semiosphere [...] brings semiotics of culture into contact with its history [...] and with the newest phenomena in culture" (Torop 2005: 159). According to Ivanov (1998: 792), "the semiosphere is placed between the biosphere and the noosphere". According to the review of Lotman's *Culture and Explosion,* "A shift in the paradigms of the semiotics of culture" by Deltcheva and Vlasov (1996: 148–152), the semiosphere is both based on an object and a metaconcept. "We live in a world based on the conjectural unity of two models" (art and science) (Lotman in Torop 1999: 13–14). As Lotman writes, "no method of description rules out another method of

description. It is as if their reciprocal tension creates a third point of view" (Lotman in Torop 2000: 14–15).

According to a conversation with Lotman that Torop quoted, Lotman held that "the fate of people, history, accomplishments of science is unpredictable. [....] Unpredictability [...] whose mechanisms is one of the most important objects of science, introduces into science a totally new manner, the component of art" (Lotman in Torop 2000: 16).

As I've noted, after Boas, history was largely neglected for a long period. Yet, history does its part in the dynamics of culture. Here one thinks of Wolf, also Kroeber, but Kroeber's history was isolated from the full meaning of culture as long as he separated nature and culture. The impoverishment of history is partly owed to the functionalists, such as early Malinowski, and the misunderstanding and misinterpretations of Boas. Boas insisted on empirical grounds for history. Obviously it was difficult to obtain historical data from primitives who were nonliterate, but Boas searched for evidence of historical data when he could through memory, ritual, and life passage events, etc. He rejected the pseudo-evolutionary history of the followers of Morgan, and the misunderstanding of Darwin, which was an important critique of American anthropology.

Lotman saw film as an important dialogical and dynamic area for semiotic studies (Lotman 1976). He detected a system of distinctive features in film, and attempted to analyze the text on the basis of markedness and unmarkedness. In his article, *Cultural semiotics and the notion of text,* Lotman replaced the text with the notion of communication, communication between addressee and addresser, between the audience and cultural tradition, between the reader and his or herself, between the reader with the text, between the text and cultural tradition (Torop 2005: 167). Discussing cultural dynamics, Lotman saw cultural language as interwoven into discrete and continual entities (iconic and spatial dynamism). According to Lotman, meaning generation is the ability of culture as a whole and its parts to avoid trivial texts that are to a certain degree already predictable (Lotman cited in Torop 2005: 169).

According to the reviewers of Lotman's book, *Culture and Explosion* (2009 [1992]), culture as a "semiotic construct cannot only be observed and described but also governed and guided" (Deltcheva, Vlasov 1996: 148). Culture as a modeling system can influence external reality. They point out that there are two issues in *Culture and Explosion*, one the relation of statics and dynamics, and the second the relation between system and beyond the system (Deltcheva, Vlasov 1996: 148). To what extent can the cultural sphere correspond to the world beyond its boundaries, the world of nature, and to what extent can one transpose "the conceptual world of language system onto language-independent reality"? (Deltcheva, Vlasov 1996: 148). For Lotman, it is necessary to have at least two languages to carry out this exploration. "Evolution in the cultural semiosphere has two basic manifestations, continuous and punctuated. Continuous can be defined as premeditated predictability" (Deltcheva, Vlasov 1996: 149). Explosion is characterized by unpredictability and sudden change, and can coexist also with gradual evolution. Information is conceived at a moment of explosion. (Deltcheva, Vlasov 1996: 149).

According to Lotman, it is possible to conjoin the unconjoinable under the impact of some creative tension either rationally or emotionally beyond the domain of logic. The rational-irrational side of creative tension exemplifies the complex interaction between translatable and untranslatable, facilitating the penetration into extra-lingual reality. Extra-lingual reality acquires the status of "absolute truth" to its culture carriers, yet we ascribe to language lies (Deltcheva, Vlasov 1996: 149). At some point they are reinstated into the semiosphere as new structural entities (Deltcheva, Vlasov 1996: 149).

According to the reviewers, art, as a primary building block of culture, functions as a domain of freedom, making the impossible possible. Furthermore, Lotman's model of evolution "in which the unpredictability of the extra-temporal explosion is constantly transformed in human consciousness into the predictability of the dynamics it generates and vice-versa" (Lotman 2009: 158). There is no final goal, the universe is inexhaustible.

> At the center of the model he positions the Creative personality conducting a great experiment, the results of which are unexpected and unpredictable even for the Creator. This approach allows us to perceive the universe as an inexhaustible source of information. (Deltcheva, Vlasov 1996: 151)

> In opposition to the linear model, Lotman introduces a third apex which compensates the tension between the two existing extremes and transforms it into a volumetric structure. The transformation of the two-dimensional plane into a three-dimensional semiosphere expands the areas towards which the development of culture can be oriented. (Deltcheva, Vlasov 1996: 151)

There is a constant interaction between culture and extra-culture, the semiosphere and the extra semiotic space. Lotman "presents a functional perspective on culture in its dependence on space outside the boundaries of art" (Deltcheva, Vlasov 1996: 149). The reviewers state that naturalization of a foreign cultural element is complicated on the level of language through the mechanism of naming (Deltcheva, Vlasov 1996: 150). Explosion does not mean infinite potentialities. Gradual evolution is not static either. Gradual explosion generates new meanings.

There is an alternation between explosion and gradual evolution. Art is a reflection of reality (Hegel's positivism). On the other hand, art as an antithetical life (neo-romanticism) embodies antinomy: art "makes possible not only that which is forbidden but also that which is deemed impossible" (Lotman 2009: 150). Lotman also asserts that the relation aesthetic/ethical is the basic model of culture. If the aesthetic approach rejects the ethical reading of art, the ethical reading becomes more stable. The relation between aesthetic and ethical, or between art and morality, is the basic model of culture. The

> very resolution, with which aesthetics denies the inevitability of the ethical interpretation of art; that very energy, which is expended on similar proofs, is the best confirmation of their stability. The ethical and the aesthetical are opposites and are inseparable as the two poles of art. The relation between art and morals echoes the common fate of oppositions in the structure of culture. (Lotman 2009: 151)

The individual, through art, can experience the artistic world as a mental experiment in which the forbidden zones of reality can be inspected. "A sharp increase in the level of freedom in relation to reality makes art an experimental pole. Art creates its own world, one which is constructed as a transformation of non-artistic reality according to the law: 'if, then…' (Lotman 2009: 151). In commenting on Lotman's *Culture and Explosion*, Deltcheva and Vlasov (1996: 150–151) write:

> The very nature of the artistic world establishes the possibility to experience before its actual experiencing in non-artistic reality. The mental experiment precedes the historical experiment and is based on the formula "explosion plus gradual evolution." The very essence of explosion determines the unpredictability of the process, simultaneously ensuring its inexhaustibility and unfinalizability. The outcomes of historical experiment, on the other hand, can be predicted, since they are based on analytical data of non-experimental, factual information. Historical experiment rejects the notion of the accidental and establishes a unidirectional evolutionary channel oriented towards a finite goal. This scheme presents God as the Great Master who performs a chain of events known to him in advance…Art can be defined as the dichotomy of the text and the boundary of the text.

Lotman sees art as constantly struggling to overcome boundaries. His model replaces Hegel's linear evolution. The universe is an inexhaustible source of information and there is no finite goal (Deltcheva, Vlasov 1996: 151). In opposition to the linear model, Lotman introduces a third apex, which expands the area in which culture is oriented, "which compensates between the two existing entities, transforms it into a volumetric structure" (Deltcheva, Vlasov 1996: 157). The two models of evolution both have explosions that are obligatory, but in binary explosion the result is annihilation. Death is the only outcome (Deltcheva, Vlasov 1996: 151). Ternary explosion is a momentary eruption, characterized not by unidirectionality but by alternativity. In a ternary system, the result is defused. It neutralizes the destructive aspects of the explosion, amortizing and preserving the system from

total destruction by accommodating the ideal to reality and guaranteeing the infinity of evolutionary processes.

> In ternary social structures even the most powerful and deep explosions are not sufficient to encompass the entirety of the complex richness of social layers. The core structure can survive an explosion so powerful and catastrophic that its echo can be heard through all the levels of culture. (Lotman 2009: 166)

Here Lotman applies his concepts to the present world. The world mistrusts explosions (such as nuclear). If explosion is integrated into the ternary structure, it could be a positive, creative force. The ternary system of the West, Lotman predicts, is coming to be accepted by Russia rather than the binary, destructive system.

Lotman concludes with a hopeful optimism, namely that

> The radical change in relations between Eastern and Western Europe, which is taking place before our very eyes may, perhaps, provide us with the opportunity to pass into a ternary, Pan-European system and to forego the ideal of destroying "the old world to its very foundations, and then" constructing a new one on its ruins. To overlook this possibility would be a historical catastrophe. (Lotman 2009: 174)

Lotman's hopeful comment, a wishful optimism leaves us with the respect for his wisdom but tinged with irony for today.

I conclude that acceptance of multiple realities does not mean that we must accept relativism as a final statement, and that we cannot continue to search for underlying universals. Moreover, we can accept and investigate concepts such as binarism and the heteroglossia of Bahtin. Lotman's semiosphere and beyond implies that space is so vast that we can continue to search for many realities. The universal human delight in art, music, and dance does not prove that these abilities are due to evolutionary survival of the fittest, for they have many functions and meanings. In this paper I have discussed why we need Bidney's insights and Lotman's open-ended vision of semiotics of culture, both of which embrace all forms of communication and reject borders that falsely enclose realities and limit thought and

imagination. These scholars decry reductionism, oversimplification, and narrow-minded rejection of those questions too difficult to answer, all of which fail to lead us to new truths. They uphold instead the questioning minds that drive humans on in the search for all aspects of reality.

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Тропы прошлого и новые дороги в американской антропологии (или зачем антропологии нужна семиотика культуры)

В статье описывается положение в американской антропологии, основоположником которой является Франц Боас, который работал во всех областях антропологии: в физической, культурной и социальной антропологии. Боас был храбрым полевым работником, который изучал жизнь эскимосов и вдохновил своих знаменитых учениц — Рут Бенедикт и Маргарет Мид — перейти существующие границы и заняться исследованиями нового типа. После этих выдающихся личностей американская антропология оказалась вновь во власти линеарного описательного позитивизма, поверхностных сравнений квантитативных черт культуры и ложных эволюционных схем, которые были неспособны познакомить нас с внутренними мирами и характером исследуемых народов. Что стало со значением,

мечтами, поэзией, воображением, ценностями и самоопределениями? Исследование философа Дэвида Бидни 1953 года является в этом смысле откровением. Бидни озвучил и развеял все мои сомнения по части направлений в антропологии, и его работа является в каком-то смысле сводной моделью нарратива американской антропологии. Не читая работ Юрия Лотмана, Бидни в своих работах набросал идеи семиотики культуры Лотмана. В статье я пытаюсь описать по след м Бидни ложные представления в антропологии и показать, как эти ошибки частично преодолевались в некоторых более поздних антропологических исследованиях, которые занимались символизмом, работой художника и субъективными качествами исследуемых. Далее я пытаюсь дать обзор школы, основанной Лотманом, объект исследования которой охватывает человеческое поведение в его целостности, демонстрирует сложность значения и коммуникации на очень широком материале — от искусства и литературы до науки и философии, и отказывается от жесткого релятивизма и закрытых систем. Школа Лотмана вдохновляет всех, кто хочет, чтобы антропология охватывала как себя, так и Другое и бахтинское двойное значение. Бидни вдохновил данную статью, как призыв изучить все возможные миры, — не отказаться от науки и реальности, а изучить глубинные связи и важнейшую роль эстетического фактора в дебрях коммуникации.

Silmitsi eriolukordadega: minevikurajad ja uued suunad ameerika antropoloogias (ehk miks ameerika antropoloogial on vaja kultuurisemiootikat)

Käesolev artikkel räägib sellest, mis on saanud ameerika antropoloogiast, millele pani aluse Franz Boas, kes tegeles kõigi antropoloogia liikidega: füüsilise, bioloogilise ja kultuurantropoloogiaga. Boas oli vapper välitööline, kes uuris eskimote alasid ning inspireeris oma kahte kuulsat õpilast — Ruth Benedicti ja Margaret Meadi — uut sorti uuringutes üle kehtivate piiride astuma. Peale neid säravaid kujusid vajuti taas lineaarse kirjeldava positivismi, kvantitatiivsete kultuurijoonte pealiskaudsete võrdluste ja väärate evolutsiooniliste skeemide rüppe, mis ei tutvustanud meile ei uurimisaluste rahvaste sisemisi maailmu ega iseloomu. Mis sai tähen-

dusest, unistustest, luulest, kujutlusvõimest, väärtustest ja enesemääratlustest? Filosoof David Bidney 1953. aasta uurimus oli selles mõttes ilmutuslik. Bidney sõnastas ja hajutas kõik mu kahtlused antropoloogia suundade osas ning tema töö toimib teatud mõttes ameerika antropoloogia narratiivi koondmudelina. Bidney visandas päris mitmes aspektis Lotmani kultuurisemiootika ideid, olemata Lotmani töid loomulikult lugenud. Käesolevas artiklis üritan kirjeldada eksiarvamusi antropoloogias, mille Bidney defineeris, ning näidata, kuidas neist eksiarvamustest on osaliselt jagu saadud mõnedes hilisemates antropoloogilistes uurimustes, mis keskendusid sümbolismile, kunstnikutööle ja uurimisaluste inimeste subjektiivsetele omadustele. Seejärel üritan anda, nii hästi kui võimalik, ülevaadet Lotmani koolkonnast, mille uurimisobjekt hõlmab kogu inimkäitumist, demonstreerib tähenduse ja kommunikatsiooni keerukust väga laialdase materjali peal kunstist ja kirjandusest teaduse ning filosoofiani välja, ning mis ütles lahti rangest relativismist ja suletud süsteemidest. Lotmani koolkond on inspiratsiooniks kõigile neile, kes tahavad, et antropoloogia hõlmaks nii ennast kui Teist ja ka Bahtini topelttähendust. Bidney oli käesoleva artikli inspiratsiooniks kui üleskutse uurimaks laiemalt kõiki võimalikke maailmu — mitte hülgama teadust ja reaalsust, vaid uurima sügavamaid sisemisi seoseid ning esteetilise faktori ülimalt tähtsat rolli kommunikatsiooni keerdkäikudes.

Parentheticals and the dialogicity of signs

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Abstract. The term 'parenthetical' is applied to an almost unlimited range of linguistic phenomena, which share but one common feature, namely their being used parenthetically. Parenthetic use is mostly described in terms of embedding an expression into some host sentence. Actually, however, it is anything but clear what it means for an expression to be used parenthetically, from both a syntactic and a semantic point of view.

Given that in most, if not all, cases the alleged host sentence can be considered syntactically and semantically complete in itself, it needs to be asked what kind of information the parenthetical contributes to the overall structure. Another issue to be addressed concerns the nature of the relation between parenthetical and host (explanation, question, etc.) and the question what is it that holds them together.

Trying to figure out the basic function of parentheticals, the present paper proposes a semiotic analysis of parenthetically used expressions. This semiotic analysis is not intended to replace linguistic approaches[1], but is meant to elaborate on why parentheticals are so hard to capture linguistically. Taking a dynamic conception of signs and sign processes (in the sense of Peirce, Voloshinov and Bahtin) as starting point, parentheticals are argued to render explicit the inherent dialogicity of signs and utterances. This inherent dialogicity is hardly ever taken into consideration in linguistic analyses, which take the two-dimensional linearity of language as granted.

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[1] A bibliography on parentheticals and related constructions is available at http://userpage.fu-berlin.de/~ndehe/bibl/parentheticals.html.

1. The trouble with parentheticals

The term 'parenthetical' covers linguistic entities ranging from words and phrases to clauses and sentences, cf. (1):

(1) a. И Россия, **безусловно,** [...] будет поддерживать в этом отношении Сербию. (*Pravda*, 1-22-2008)[2]
'And Russia will, **of course,** support Serbia also in this respect.'

b. Но попасть в этот современный мир старым методом »бури и натиска« — **к счастью для нас** — невозможно. (2-17-2008)[3]
'But getting into this present-day world by means of the old method of "Storm and Stress" is — **luckily to us** — impossible.'

c. Я, **если хочешь знать,** в юности в театральное поступала. (2-17-2008)
'In my youth — **if you want to know** — I went to the drama school.'

d. Тем более что Тадич — **он этого не скрывал и не скрывает** — считает стратегической целью Сербии [...] вхождение в Европейский союз. (*Izvestija*, 1-24-2008)
'Especially as Tadić — **he did not and does not hide it** — poses Serbia's joining the European Union as a strategic objective.'

This variety is captured by Burton-Roberts' (2007: 179) rather general definition of a parenthetical (P) as "an expression of which it can be argued that, while in some sense 'hosted' by another expression (H), P makes no contribution to the structure of H". Apparently, there does not seem to be any restriction as to what kinds of linguistic expression can be used parenthetically. Sometimes, however, a distinct category of parenthetical expressions is proposed. For English, Urmson (1952: 461) isolates a group of parenthetical verbs, i.e. verbs "which, in the

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[2] Examples from journals and magazines are taken from their respective online versions. Unless indicated otherwise, the date of issue agrees with the access date.

[3] Unless indicated otherwise (cf. footnote 1), examples are taken from the Russian National Corpus (www.ruscorpora.ru). The access date is given in brackets.

first person present, can be used [...] followed by 'that' and an indicative clause, or else can be inserted at the middle or the end of the indicative sentence", and which cannot be used with the progressive form:

(2) a. **I suppose** that your house is very old
b. Your house is, **I suppose,** very old.
c. Your house is very old, **I suppose**.
d. I suppose — ***I am supposing**

Besides parenthetical verbs, Urmson (1952: 466) also isolates a class of parenthetical adverbs, such as *luckily*, *admittedly*, *undoubtedly*, or *possibly*, which are as loosely attached to sentences as parenthetical verbs.

For Russian, expressions like those in (3) are regarded as having parenthetic use only (Vinogradov 1960: 140):

(3) a. Психолог же зачастую, **во-первых,** должен работать с неотобранным материалом, **во-вторых,** он ограничен в своей работе нормами морали, **в-третьих,** ему приходится решать нестандартные задачи [...] (2-10-08)
'Very often, a psychologist, **first,** has to work with unselected material, **second,** he is restricted in his work by ethic norms, **third,** he has to solve unusual tasks.'
b. Чего мы от него, **собственно говоря,** добиваемся? (2-10-08)
'What do we, **strictly speaking,** obtain from him?'

In other cases, however, both a parenthetical and an integrated use are possible, as well as hypotactic constructions with *что* ('that'):

(4) a. И они, **очевидно,** уговорили Евгения Примакова поддержать их идею. (9-30-2008)
And they, **obviously,** persuaded Evgenij Primakov to support their idea.'

b. «Николай Семенович» **очевидно** тоже смотрел в этот вечер телевизор. (2-10-08)
'That evening, "Nikolaj Semenovich" **obviously** watched TV as well.'

c. **Очевидно, что** команда должна быть одна. (2-10-08)
'**It is obvious that** the party has to be united.'

Thus, parenthetically used expressions do not carry any inherent feature that marks them as parenthetical and justifies the postulation of a separate part of speech. This raises the question of how parenthetic use can be recognised by the recipient. In written discourse, parentheticality is indicated by means of punctuation. In oral discourse, intonation is assumed to play an important role (Potts 2007, for example, proposes a 'comma intonation' for appositions). Phonetic analyses of actual utterances, however, cast the general validity of this assumption into doubt (cf. Krause 2007, Grenoble 2004).

Burton-Roberts' definition (see above) not only captures the variety of parentheticals[4], it also characterises them as being hosted by other expressions. The assumption of a parenthetical being in some sense embedded in a host sentence requires a syntactic account of this embedding. It is, however, not quite clear how parentheticals are to be integrated into the overall sentence structure, since they are not immediately dominated by some other constituent of the alleged host sentence (cf. Espinal 1991: 729–735 for an overview over their idiosyncratic syntactic behaviour). Therefore, parentheticals pose problems especially for one central principle in syntactic theory, namely that hierarchical structure determined by asymmetric c-command maps uniquely to linear order (Kayne 1994: 3).[5]

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[4] Henceforth, the notion 'parenthetical' is used as an abbreviation for 'parenthetically used expression'.

[5] In his discussion of non-restrictive relative clauses as specific types of parentheticals, Burton-Roberts (1999) denies linear precedence a syntactic status and proposes to regard it as "a matter of representational, not grammatical, fact" (Burton-Roberts 1999: 50).

Trying to reconcile parentheticals with this principle, syntactic accounts assume that they are dominated by the sentence node (McCawley 1982), they regard them as orphans (Haegeman 1988), that is, deny any linguistic relation between the parenthetical and the host, or propose a three-dimensional syntax (Espinal 1991) to capture the fact that parentheticals are in some sense connected with the host, but as 'disjunct constituents' are not dominated by any of its constituents. Analysing parentheticals as disjunct captures the insight that the parenthetical and the 'basic' sentence do not form a syntactic unit (cf. also Peterson's 1999 account in terms of non-syntagmatic relations), but does not convincingly account for the connection — if not linguistic, then at least conceptual — between the both.

From a semantic point of view arises the question what kind of information is provided by parentheticals. Suggestions include marking speaker's attitude, providing background information, or adding some kind of metatextual commentary (cf., e.g., Vinogradov 1960).

The problems outlined in this section have been noted already by Schwyzer (1939). Facing the troubles with parentheticals, he suggests regarding parentheticals as a part of a more basic and comprehensive phenomenon of language — without, however, providing an explanation of what this phenomenon might be. From the semiotic analysis proposed in the present paper, the inherent dialogicity of signs and utterances emerges as a possible candidate.

2. Types of parentheticals

In order to account for the specific nature of parentheticals and to cope with their many possible forms and functions, various proposals have been made to classify them. Vinogradov (1960: 140–174), for instance, draws a distinction between two groups of parentheticals, which he calls *vvodnye* ('introductory') and *vstavnye* ('inserted') words, phrases and sentences. *Vvodnye* are illustrated in (5):

(5) a. Но, **по-видимому,** они всё рассчитали [...]. (2-4-2008)
'But, **apparently,** they took everything into account.'

b. Этим, **должно быть,** и попытаются оправдать свои неудачи многие провалившиеся фавориты. (2-4-2008)
'By means of that, **probably,** a lot of failed favourites will try to justify their failure.'

c. И, **признаюсь,** спросив себя так, я не нашёл что ответить. (2-18-2008)
'And, I admit, having asked myself this way, I didn't find an answer.'

d. Но у нас в стране, **знаете,** представления об этапе как о поезде [...]. (2-4-2008)
'But in our country, **you know,** the image of this phase is like that of a train.'

Even though *vvodnye* constitute a relatively closed class (Grenoble 2004: 1956), they exhibit a considerable variety in both form (morphosyntax and lexical class) and meaning. Among the meanings listed are, just to mention a few, indication of source, reliability and emotional characterisation of information, relation of the current utterance to other utterances, and addressing the interlocutor (cf. e.g., Vinogradov 1960: 140–165). Syntactically, *vvodnye* are characterised by their non-integration in the sentence, which distinguishes them from modal words (Zybatow 1989). This distinction is indeed crucial, since modal words are modal by their very semantics, whereas there is nothing inherent in *vvodnye* that would mark them as parenthetical (cf. also Hinrichs 1983: 9). Even though modal words may very well be used parenthetically, (5b), and even though parentheticals may indeed receive a modal — predominantly epistemic — interpretation (cf. section 5), this does not justify the conflation of a semantic-syntactic category with a functionally defined class of entities of language use, and the establishment of a separate part of speech.

As regards *vstavnye*, there does not seem to be any restriction as to which kinds of expression may be used parenthetically:

(6) a. Сцена, предваряющая падение занавеса — **«Тени»** — признанный мировой шедевр [...]. (*Vesti*, 1-23-2008)
'The scene anticipating the falling of the curtain — **"The shadows"** — is a world famous masterpiece.'

b. В школьные годы **— в классе пятом-шестом —** недолго занимался гимнастикой [...]. (*Izvestija*, 1-22-2008; accessed 1-23-2008)
'In my school-days — **in the fith or sixth grade** — I did some gymnastics.'

c. Но подтверждение **— или опровержение —** этому можно добыть с помощью дистанционных методов. (*Nezavisimaja Gazeta*, 1-23-2008)
'But the proof — **or disproof** — for that can be gained by means of remote methods.'

d. Совместный проект **— автоматической и пилотируемой марсианской экспедиции —** [...] интересное решение. (Nezavisimaja Gazeta, 1-23-2008)
'A joint project — **that of an automatic or manned expedition to Mars** — is an interesting decision.'

e. Другие специалисты считают, что изъятие мизерной доли стока Оби **(в проекте канала шла речь о нескольких процентах от общего стока этой реки)** никоим образом не угрожает экологии сибирского региона [...]. (*Pravda*, 1-22-2008)
'Other experts think, that the removal of a small part of the drain of the Ob **(in the channel project it was being talked about a few percents of the overall drain)** by no means threatens the ecology of the Siberian region.'

Vinogradov (1960: 165) analyses *vstavnye* as disrupting the sentence and adding various kinds of additional information, such as explanation, emphasis, correction etc. This type of parentheticals may also be introduced by conjunctions (Vinogradov 1960: 171), in which case they are in some sense syntactically related to this sentence (Paducheva 1996 thus distinguishes *sobstvenno-vvodnye* 'actual-intro-

ductory' and *vvodno-sojuznye* 'introductory-conjunctional' constructions).

As can be seen from the examples in (5) and (6), Vinogradov's terms are problematic, since not all *vvodnye* appear in an introductory position, and since both types may be inserted (cf. also Grenoble 2004: 1956). They are therefore misleading to a certain degree — parentheticals cannot be classified in positional terms. Moreover, the mere listing of possible interpretations for the various sub-types of parenthetical constructions does not solve the problems mentioned above.

A distinction along other lines is proposed by Grenoble (2004). Emphasising the morphosyntactic diversity of parentheticals, she takes their "operating on a distinct discourse plane" (Grenoble 2004: 1954) as the unifying feature. Within this general function, she draws a distinction according to the kind of information contributed by the parenthetical: conceptual or procedural. These relevance theoretic notions capture the difference between representation and computation (Sperber, Wilson 1995), i.e. between delivering the conceptual information and instructions on how to integrate it. Accordingly, conceptual parentheticals "add conceptual meaning", whereas procedural parentheticals deliver instructions as to "how the host proposition is to be interpreted, or how it is to be contextualised" (Grenoble 2004: 1973). This distinction largely, but not completely, corresponds to Vinogradov's distinction of *vvodnye* vs. *vstavnye*, but avoids the misleading association with a specific position in the sentence.

The examples in (7), taken from Grenoble (2004: 1969–1971), illustrate the various kinds of discourse shifts possible for parentheticals:

(7) a. Ну трудно с американцами**, я понимаю**.
'Well it's difficult with Americans**, I understand**.'

b. Он**, видишь/понимаешь,** очень старый.
'He is**, you see/understand,** very old.'

c. Я не понимал (**теперь я понял**), что [...].

'I had not understood **(now I understand)**, what [...].'
Вот что меня удивило: там стоит велосипед.
'**Here's what surprised me:** a bicycle was standing there.'

Shifts in discourse encompass two groups: "shifts in the primary deictic dimensions of time, space or person" (Grenoble 2004: 1972), cf. (7a, b), and shifts in "discourse deixis" (*ibid.*) to another level of discourse making meta-statements or introducing additional information (7c, d). In the former case, both conceptual and procedural parentheticals are possible, in the latter, only conceptual ones (*ibid.*).

Another possibility of classifying parentheticals, which also relates in some sense to Vinogradov's distinction, is provided by Hinrichs (1983, 1986). He takes as the decisive feature of parentheticals not some specific semantic characteristics, but the fact that they are there (1986: 125). Parentheticals do not have specific lexical-semantic meanings, but stand out for their indexicality ("*Verweisungskompetenz*", Hinrichs 1983: 19). Based on this indexicality, Hinrichs distinguishes two groups of parentheticals: one group — which seems to correspond to *vvodnye*[6] — refers to the underlying act of saying, making it thereby explicit (Hinrichs 1983); the other group — obviously corresponding to *vstavnye* — actualises a paradigm of other texts and relates them to the current text (Hinrichs 1986). He rightly emphasises that in order to properly analyse parentheticals, the distinction between a meta- and an object-level, i.e. the level of parenthetical and the level of the sentence, is crucial (Hinrichs 1983: 12). This distinction is lost, if, for instance, *vvodnye* are incorporated into the class of modal words.

Thus, both Grenoble's and Hinrichs' distinction of parentheticals — in terms of the information they contribute, and in terms of their referring potential — agree in that parentheticals in some sense assume a meta-position and connect two different layers of discourse, more precisely — two layers of utterances. Dealing with parentheticals, the notion of utterance is indeed of central importance. Not only can we assume that the parentheticals are inserted with respect to an

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[6] Hinrichs does not introduce specific terms.

utterance (to convey a comment etc), it is the characteristic features of utterances themselves that provide the basis for an account of the function of parentheticals.

3. Utterances and communication

Utterances as entities of language use are typically treated with respect to their functioning in communication. Depending on the concept of communication, the role of utterances varies from mere objects used to convey some message, to active players connecting speaker and hearer.[7] These opposing views on communication, which are mainly based on different concepts of the linguistic sign, can be illustrated with the approaches of Jakobson on the one hand, and Bahtin and Voloshinov on the other.

3.1. Jakobson

Jakobson's (1971[1957]: 130) concept of communication — "[a]ny message is encoded by its sender and is to be decoded by its addressee" — is based on a dyadic model of signs as pairings of signans and signatum, and strongly influenced by Shannon and Weaver's (1949) technical communication model. This concept is problematic in that it leaves language as an object used by the speaker in order to encode a message and regards the hearer as nothing but a passive recipient of the speaker's product. Moreover, the notion of message itself proves rather problematic since Jakobson seems to use it in divergent senses.

Attempting to overcome the Saussurean dichotomy of *langue* and *parole*, Jakobson takes both code (*langue*) and message (*parole*) as "vehicles of communication", each functioning in a "duplex manner"

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[7] Within this latter line of thought, speaker and hearer are not outside the utterance, but are an integral part of it (cf. Sonnenhauser 2008). In the present paper, the notions 'speaker' and 'hearer' are used as mere auxiliary terms.

(Jakobson 1971[1957]: 130), i.e. both can be made use of and both can be referred to at the same time. The cross-classification results in four types: M/M (message referring to message, e.g. indirect speech), *C/C* (code referring to code, e.g. proper names), *M/C* (message referring to code, e.g. translations) and *C/M* (code referring to message, e.g. deictic expressions). Two of these types are concerned with reference to the message, and are hence of interest for the purposes of the present paper: *C/M* and *M/M*. The former characterises the class of shifters, the latter is exemplified by the incorporation of foreign speech (Jakobson 1971[1957]: 130–132).[8]

On closer inspection, Jakobson's cross-classification turns out quite problematic, as becomes obvious especially with his elaboration of *C/M*. This type characterises shifters, a class of lexical items whose general meaning "cannot be defined without a reference to the message" (Jakobson 1971[1957]: 131). In order to apply this notion to a classification of verbal categories, Jakobson introduces the distinction between the narrated event (*En*), which every verb is concerned with, and the speech event (*Es*).[9] Verbal categories implying a reference of *En* to *Es* constitute the class of shifters.

The transition from considering the role of *C* and *M* in the constitution of duplex types to the elaboration of shifters in terms of *En* and *Es* testifies a rather strong break in Jakobson's argumentation. Obviously, he offers two characterisations of shifters within one and the same paper: as code referring to message (*C/M*), and as a narrated event referring to a speech event (*En/Es*). Comparing both definitions one wonders how they match, or more precisely, whether they match at all. This concerns mainly the concept of the message *M* — does it comprise both *En* and *Es*, or only *Es*? Actually, Jakobson seems to use this notion in two senses: in a more comprehensive sense as one of the two vehicles of linguistic communication, and in a narrower sense in

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[8] Jakobson does not seem to be quite sure how to handle forms denoting "events known from the speaker only from the testimony of others" (1971[1957]: 131): as M/M, i.e. as a means to integrate foreign speech (130), or as C/M, i.e. as shifters (135) relating a narrated event and a narrated speech event to a speech event.

[9] Every speech event and every narrated event include also participants.

the definition of shifters, where 'message' seems to pertain to *Es* only. The confusion concerning the notion of message is also found in Jakobson's elaboration of the six functions of language (Jakobson 1971[1960b]), where 'message' is again used in a double sense, namely as the overall content of communication, and at the same time as a part of this overall content. Moreover, speaker and addressee are separated from the message, their interaction taking place in the speech event.

Several years later, Jakobson (1971[1968]: 703) proposes a useful distinction which, however, again questions his notion of message and the status of *En* and *Es* — the distinction between communication "which implies a real or alleged addresser" and information "whose source cannot be viewed as an addresser by the interpreter of the indications obtained". Communication encompasses information and an addresser — in terms of Jakobson's 1971[1957] terminology, communication encompasses both *En* and *Es*, whereas information delivers only an *En*. On the basis of these assumptions, however, defining shifters as implying a reference of *En* to *Es* as opposed to categories lacking such a reference and describing only *En* is not tenable any longer. Actually, such a distinction could be drawn only with respect to abstract entities, entities not being used in actual utterances. In utterances, i.e. in verbal communication, both *En* and *Es* are present, both are necessary for interpretation to arise.[10]

Despite these critical remarks, the distinction between *En* and *Es* is indeed important, but it has to be drawn in a less categorical manner. It will be argued that both are interconnected by virtue of being integral parts of a triadic sign. Being integral parts of one sign, they can be targeted, i.e. taken as an object, only from an outside (i.e. meta-) position.

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[10] Cf. Voloshinov's (1993[1929]: 74f) distinction between signal and sign: a signal can be recognised, whereas a sign can be comprehended. A linguistic entity is not a self-identical signal but a constantly changing, flexible sign. The task of comprehension thus consists in understanding a sign within a given context, i.e. in understanding its novelty, and not in recognising its identity.

3.2. Bahtin/ Voloshinov

Voloshinov and Bahtin offer a concept of communication which is based on the inherent dialogicity of linguistic signs. While Jakobson remains committed to a static and dyadic concept of sign and sign system, Voloshinov's and Bahtin's views bear striking resemblance to Peirce's dynamic characterisation of the sign and the sign process (cf. section 4). It almost seems as if they provided an application of the Peircean model in their analysis of signs and utterances (for a comparison of the Bahtinian and the Peircian concept of semiotics cf. Ponzio 2000).

Bahtin and Voloshinov take the social event of linguistic exchange, manifesting itself in utterances, as the actual reality of language (Voloshinov 1993[1929]: 104). Within the overall dialogic process, utterances are but one moment, one drop in the stream of linguistic exchange (Bahtin/ Voloshinov 1930: 66), constituting a connecting element within the complex organisation of the chain of other utterances (Bahtin 2000: 261). Utterances are characterised by their addressivity (Bahtin 2000: 292), and the active role of both speaker and hearer. They are framed by a change of speakers indicating their boundaries, i.e. their completeness and their readiness to be answered (Bahtin 2000: 269). Moreover, utterances are full of the speaker's evaluations, whereas words or sentences as elements of language are neutral and do not evaluate anything (Voloshinov 1930: 48).[11]

Bahtin (2000: 259) considers a concept of linguistic interaction consisting of an active speaker and a hearer passively perceiving and understanding an utterance as scientific fiction.[12] Rather, the hearer has to be ascribed an active role: perceiving an utterance and understanding it, the hearer assumes an active, answering position with respect to this utterance. This active, answering position consists in agreeing or disagreeing with the utterance, complementing or changing it, etc. In this way, the hearer is at the same time a speaker. The speaker in turn is

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[11] The question of how to determine the boundaries of an utterance is central to text linguistics.

[12] This criticism applies to both 'subjective individualism' and 'abstract objectivism' (cf. Voloshinov 1993 [1929]).

geared to exactly this answering understanding: he does not expect passive understanding in the sense of mere duplication of his thoughts but some kind of reaction. Anticipating reactions and presupposing prior utterances to which his own utterance reacts, the speaker is himself an answering person. Thus the addresser is at the same time an addressee and vice versa (Bahtin 2000: 259–261).

This is another crucial difference with Jakobson's concept of communication, according to which the "alternation of the encoding and decoding activities" (Jakobson 1971[1968]: 697) takes place in temporal sequence, and linguistic analysis has to keep those two standpoints, the roles of speaker and hearer, strictly apart (Jakobson 1992 [1959]: 434). Although Jakobson grants that within linguistic exchange both directions — that of encoding and that of decoding — are present simultaneously, keeping them rigorously apart in linguistic analysis easily leads to taking them as separate in the actual utterance as well.

Since the subject matter of an utterance does not appear in this utterance for the first time, utterances constitute a meeting place for the positions of the interlocutors, for various current and previous theories, points of view, etc. An utterance is thus concerned not only with the object being talked about, but also with foreign speech about this object (Bahtin 2000: 290f), and hence addresses previous and follow-up utterances. Therefore, the speaker constructs his utterance both as a reaction to former utterances and with respect to possible reactions, i.e. future utterances (Bahtin 2000: 290f). As a consequence, utterances are full of answers, and full of anticipating reactions of various kinds.[13] This dialogicity of utterances in the sense of being reactions to what has been said and to what will be said becomes evident with the different kinds of incorporation of foreign speech, i.e. "*речь в речи, высказывание в высказывании*, но в то же время [...] *речь о речи, высказывание о высказывании*" ('speech within speech, utterance within utterance, and at the same time speech about speech, utterance about utterance'; Voloshinov 1993 [1929]: 125).

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[13] That this is no contradiction will become evident with the analysis of parentheticals in section 5.

The concept of utterances as reacting and incorporating reactions opens an interesting perspective on the analysis of parentheticals. This perspective will be dealt with in a semiotic framework, the main assumptions of which are outlined in the following section.

4. The semiotic foundation: Peirce's triadic conception of the sign

Peirce's concept of signs and the sign process provides a theoretic framework for the dialogicity of signs and the properties of utterances outlined in section 3.2. He defines the sign as consisting of a representamen, an object and an interpretant which is itself a sign representamen, referring again to an object and bringing about an interpretant, and so forth.

Crucially, all relations constituting the sign are to be treated on an equal level, there is no way of reducing this triadic relation into dyadic relations. The object-relation can be said to roughly correspond to the meaning of the sign as an element of a certain language. The interpretant-relation as the effect in an interpreting mind contributes the kind of meaning language users ascribe to the sign, based on the object relation. There may thus be various interpretant-relations, the decisive point being that the interpretant relates to the same object as the sign representamen (Fig. 1).[14]

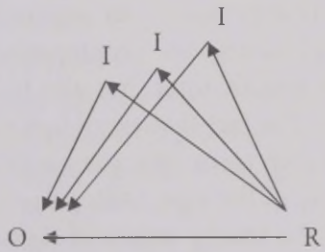

Figure 1. Various possible interpretant relations

[14] This kind of representation is taken from Kockelman 2005.

It is important that the interpretant does not merely refer to the object the representamen refers to, but also to that very relation between representamen and object. In the course of semiosis, the interpretant turns into a representamen *R2* for the sign process to continue. As *R2* for the follow-up semiosis, it takes the relation *R-O* as object *O2* (Fig.2).

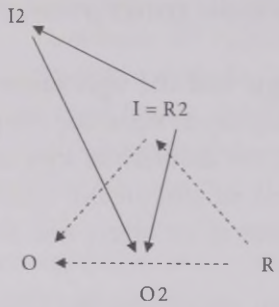

Figure 2: Interpretant I as representamen R2 with object O2

In this way, the interpretant becomes more and more definite in the course of the sign process, as is emphasised, e.g., in Peirce's MS 517 (323f). If the object of *I/R2* were not 'more' than *R*'s object on the prior level, semiosis would not continue but collapse into a circle (cf. also Schönrich 1999).

The idea that the interpretant is an improved symbol captures Bahtin's assumption of utterances presupposing prior utterances, referring not only to a specific topic, but also to what has been said about this topic before. The fact that every sign needs to bring about an interpretant, which then turns into a representamen and so forth, captures the addressivity of the sign. Dialogicity in both directions is thus a consequence of the triadic nature of signs and the process of semiosis.

Jakobson's *Es* and *En* are incorporated in this sign concept via *R* and *O*. The sign representamen as the material part of the triadic relation corresponds to the speech event *Es*. This representamen refers

to an object, the narrated matter *En*. The relation between both is established and represented by the interpretant. This interpretant turns into a representamen, which is here captured as Es_2, but which may equally well consist in some other effect (e.g. some kind of non-verbal action; Fig. 3).

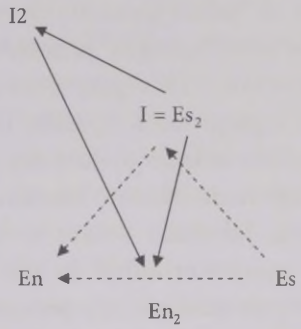

Figure 3. Incorporation of *En* and *Es*

The Peircean concept of the sign process thus integrates *Es* and *En* as different, but at the same time intimately interconnected, entities. The relation between the two is indexical — and it has to be indexical. Otherwise, according to Peirce's system of universal categories, the object relation of *R* would be a mere possibility or a strict necessity and hence in neither case actually existing. Since *Es* and *En* cannot be but connected by an indexical relation, indexical reference to *Es* is not a characteristic feature of shifters — the underlying speech event and the indexical relation to the narrated matter are ubiquitously present.[15] Still, *Es* and *En* may be separately referred to, but this reference has to happen from an outside position, occupied, for instance, by a parenthetical (cf. section 5).

[15] Therefore, 'subjectivity' understood as the utterance's reference to the speaker, is a tautological notion (cf. also Hinrichs 1983: 16, Sonnenhauser 2008).

Within Peirce's semiotic, there is no need to postulate a pre-established code. Instead of being given in advance, both the object and the interpretant relation are formed and stabilised by means of habits, eventually giving rise to certain expectations. Both habits and expectations arise with language use, and do not in any way exist outside or prior to it. Therefore, Jakobson's (1971 [1960a]: 573) definition of interlocutors as "actual users of one and the same linguistic code encompassing the same legisigns" is based on a misapprehension of Peirce's sign conception. This gets even more obvious facing Peirce's definition of legisign as a specific characterisation of the representamen. The notion of legisign does not say anything about the sign's object- and interpretant-relation. Moreover, speaking of a code encompassing legisigns, Jakobson seems to consider the signans-signatum dichotomy equivalent either to the representamen-object relation or to the representamen-interpretant relation (as in his adaptation of Peirce's icon, index and symbol). This is problematic in both cases, since Peirce's triadic sign may not be reduced to dyadic relations.

Indexical relations are of central importance for utterances. Within an utterance, indices serve a double function: external indices establish a relation to the utterance's situational object(s), internal indices establish the utterance's internal structure ('token-syntax', cf. Pape 2000) reflecting the structure of the situational object(s). The significance of indexical relations is elaborated, e.g., in MS 517 (309f), where Peirce emphasises that terms alone do not have any meaning. This corresponds to Voloshinov's and Bahtin's claim concerning the neutrality of words as elements of the lexicon (cf. section 3.2). Terms need to be turned into indices, i.e. be used in an actual utterance where they are related to their objects (external indexicality). The same holds for combinations such as *Socrates wise*, or *Socrates* and *is wise*, which do not have a meaning "unless there is something to indicate that they are to be taken as signs of the same object" (MS 517: 310). Included in this internal index is an icon mirroring the structure of the overall object of *Socrates is wise* (MS 517: 310).

Both external and internal indexical relations will prove important for the question of how parenthetic use of linguistic expressions can be recognised.

5. Parentheticals as indices

According to Voloshinov and Bahtin, addressivity is the basis for the dialogicity of signs and utterances, i.e. for their active relation to other signs and utterances (Bahtin 2000: 297). Addressivity manifests itself not only between two or more utterances, but also within one single utterance, namely in the incorporation of foreign speech, which is achieved not only on the thematic plane, but also signalled by syntactic means (Voloshinov 1993 [1929]: 120–134).

Relating two utterances, parentheticals exhibit a phenomenon similar to the incorporation of foreign speech. There are, however, crucial differences. Contrary to the incorporation of foreign speech by syntactic means, parentheticals incorporate 'own' speech, and do this without overt lexical or syntactic means. Parentheticals are not speech within speech, but speech about speech (*речь о речи*, cf. section 3.2). Both 'speech' and 'speech about' belong to one and the same speaking subject, but are located on separate levels, hence making one's own speech, or part of it, the object of evaluation (Voloshinov 1993 [1929]: 122). In this case, a transfer of attention takes place — the speaker focuses on the speech itself, not on its topic. Voloshinov (1993 [1929]: 122) takes this change of direction to be triggered by the interests, i.e. reactions, of the hearer.[16]

Along these lines, parentheticals can be regarded as reactions to the hearer's reactions. These reactions, however, are not overtly expressed, but implied by the parenthetical. Since one utterance may trigger various reactions — questions, doubts, amendments, etc. — there are various possible relations between the parenthetical and the implied

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[16] Note that this reaction does not imply the existence of two different speaking subjects. The 'speaker' is at every time also a 'hearer' and vice versa, cf. section 3.2.

reaction on the one hand, and the parenthetical and the utterance on the other hand (on the problem of this later kind of relations cf., e.g., Asher 2000). The difficulty of pinning down these relations is reflected in the traditional accounts that have tried to define parentheticals in terms of these relations, which has lead, however, to mere listing of individual cases (like the illustrative examples in e.g. Vinogradov 1960 for Russian, or Penchev 1966 for Bulgarian).

Before turning to the functioning of parentheticals, the question of identification has to be clarified. Even though there is nothing inherent in parentheticals tagging them as a parenthetical, and even though neither intonation nor syntax unambiguously mark parentheticals, it is still possible to recognise the parenthetic use of specific expressions. It is the function of indices and the establishment of habits and expectations that play a crucial role in this.

As has been pointed out, the process of semiosis leads to the establishment of habits which in turn lead to the establishment of expectations. Expectations may be fulfilled, or they may be contradicted. If the latter is the case, a surprising fact is detected, which starts off a process of abductive reasoning. Abductive reasoning consists in a search for hypotheses based on which the surprising fact can be accounted for. In the case of parentheticals, the habits — and hence expectations — established concern the internal and external indices of utterances. With the internal token-syntax being disrupted by a parenthetical construction, these expectations are contradicted, cf. (8):

(8) Вышедшие в финал кандидаты радикал-националист Томислав Николич и действующий президент либерал Борис Тадич идут [...] ноздря в ноздрю. (Izvestija, 1-24-2008; modified by B.S.)
'The candidates who made it to the final the radical-nationalist Tomislav Nikolić and the sitting president, the liberal Boris Tadić are racing neck to neck.'

Perceiving the utterance in (8), the recipient most probably stumbles across the expression *радикал-националист Томислав Николич и*

действующий президент либерал Борис Тадич ('the radical-nationalist Tomislav Nikolić and the sitting president, the liberal Boris Tadić') which does not quite fit into the overall structure. Since the token-syntax iconically mirrors the structure of the external object, the disruption has also consequences for the external relation of the utterance: the object of this expression is not part of the overall object referred to by the utterance.

The fact that this part of the utterance is related to the rest of the utterance in some other way than expected, is reflected in written discourse by graphic marking (dashes, brackets, or commas) displacing the parenthetical from the rest:

(8') Вышедшие в финал кандидаты — **радикал-националист Томислав Николич и действующий президент либерал Борис Тадич** — идут, что называется, ноздря в ноздрю. (Izvestija, 1-24-2008)
'The candidates who made it to the final — **the radical-nationalist Tomislav Nikolić and the sitting president, the liberal Boris Tadić** — are racing neck to neck.'

In oral discourse, pauses help to mark this deviation, but not in a consistent and reliable way.[17] However, intonation does seem to play some role at least. Grenoble (2004: 1961) finds an intonation contour specific for parentheticals, based on the phonetic analysis of examples such as (9), where the part in italics is intonationally set apart:

(9) A он уже сдал специальность
B да?
A специальность он уже сдал причем знаете как сдают=
=*я тоже думала что он будет финский сдавать*
а вопросики у него были такие // [sighs]

[17] Hofmann (1998) points out that especially the pause at the end of the parenthetical may very well be missing. Moreover, pauses at certain times are necessary in speaking, and hence do not in every case indicate parenthetic use.

лексика финно-угорских языков заимствование исконное

A 'He's already taken his major area exam.'

B 'Yes?'

A 'He's taken his major area exam, and moreover, do you know how they take them?
'=*I had also thought he would take a Finnish exam*=
and the questions he had were like this // [sighs]
the Finno-Ugric languages' lexicon's older borrowing'

Disambiguation is necessary especially with adverbs which can either be used parenthetically or can be integrated into the internal token-syntax.[18] Hence, their intended non-integration has to be signalled. In written discourse, this is achieved by means of punctuation (on the disambiguating function of punctuation cf. also Krause 2007: 80)[19], cf. (10), in oral discourse by means of longer than usual pauses, cf. (11) (pauses are indicated by diagonal dashes).

(10) a. На самолет [...] **конечно** опоздала (2-19-2008)
'To the plane, I was **certainly** late.'
b. он**, конечно,** опоздал на час (2-10-2008)
'he was**, of course,** one hour late'

(11) a. Вы **наверное** имели в виду Горбачева / а не Ельцина. (2-10-2008)
'You **probably** had Gorbachev in mind / not El'tsin.'
b. И всё это / **наверное** / специально и делается к этому. (2-10-2008)
'And all that / **probably** / happens specially to that.'

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[18] Schwyzer (1939: 40) sketches a process of weakening of short parenthetical sentences to adverbial elements, with the decisive factor being the suppression of pauses previously having framed such short parentheticals.

[19] Punctuation does not necessarily reflect prosodic characteristics (Krause 2007: 80).

In (10a) and (11a), *конечно* ('certainly') and *наверное* ('probably') serve to modify *опоздала* ('was late') and *имели* ('had'), whereas in (10b) and (11b), they are not integrated into the sentence structure, i.e. used parenthetically. This confirms Hinrichs' (1983: 19) assumption that there is nothing inherent in expressions like *конечно* or *наверное* marking them as parenthetical. If parenthetic use (i.e. non-integration in the internal token-syntax) is intended, this needs to be marked.

The surprising fact arising from the part not fitting the expectations, needs to be explained by a hypothesis. One possible hypothesis is provided by the assumption that the part not fitting the internal structure takes the utterances as its object (the semiotic justification will be given in section 6). Hinrichs (1983: 21) points out that the means such as pauses or intonation — in written discourse, commas, dashes etc. — serve to signal 'otherness', and hence 'deviation'. This in turn causes the inference of reference to the speech event ("*Sagenhandlungsreferenz*"; Hinrichs 1983: 21), or to the narrated matter. That is, a transfer of attention takes place from the topic of the utterance (its object indicated by external indices) to the utterance itself. Since this inference is based on abduction, it does not have to happen or may be overridden by other assumptions — hence the varying judgments across speakers concerning the degree of syntactic integration.

Converting the direction of reference, the parenthetically used expressions take the utterance as an object, which contradicts the assumption of parentheticals being embedded in some host sentence. Since every utterance consists of both *Es* and *En*, there are two aspects that may be targeted by a parenthetical. Furthermore, like every indexical relation, the relation between a parenthetical and an utterance may be of two kinds: degenerate or genuine. Degenerate indices, such as demonstratives or proper names, do not involve an iconic component and stand directly for their object. Genuine indices, such as the deictic *I*, *here*, *now*, or definite descriptions, include an iconic component and thus deliver additional information (for the connection between the iconic component and informativity cf. Atkin 2005). This distinction grasps Grenoble's (2004) distinction of procedural parentheticals delivering mere processing instructions, and

conceptual parentheticals delivering additional information about their object.

Hinrichs' and Grenoble's accounts thus capture each one an important aspect concerning the function of parentheticals: the object of the indexical relation (*Es* or *En*) and the informativity of this relation (degenerate or genuine). The cross-classification of these parameters delivers four possible general types of parentheticals (cf. Table 1), which are based merely on functional characteristics. Each of these types in turn allows for a range of specific interpretations of the parenthetical relation. Reference to *Es* comprises Hinrich's reference to the speech event, and Grenoble's shifts of time, space and person. Reference to *En* corresponds to Hinrich's incorporation of another discourse and Grenoble's shift away from the main discourse topic. Parentheticals may either simply refer to *Es* (degenerate) or provide also additional information about it (genuine). The combination 'reference to *En*, degenerate index', marked with '∅' in Table 1, corresponds to what Grenoble (2004: 1972) calls a procedural shift away from the discourse topic, a possibility which she excludes.

Table 1. Types of parentheticals

		indexical relation to	
		Es	***En***
informativity	**degenerate**	А иначе, **понимаешь**, село рухнет. (10-5-2007) 'But otherwise, **you see**, the village will collapse.'	∅
	genuine	У меня — **теперь признаюсь** — опускались руки. (2-4-2008) 'I have — **now I admit it** — lost my courage.'	Хореографами — **как художниками и композиторами** — рождаются, а не становятся. (*Izvestija*, 1-20-2008) 'Choreographers — **just like artists and composers** — are born, and not made.'

Note that this cross-classification is not meant to imply that every parenthetically used expression is unambiguously classifiable into one of these four types. That this can hardly be the case follows from the fact that *Es* and *En* are intimately tied to each other as integral parts of a sign.

A further question to be clarified concerns the underlying cause for this change of direction, i.e. the justification for the insertion of a parenthetical construction. Voloshinov (1993 [1929]: 122) points out that the change of direction is triggered by the interests of the hearer. It is with respect to these interests of the hearer, or his reactions, respectively, that an utterance is constructed. Parentheticals thus can be regarded as being triggered by anticipated reactions to the current utterance concerning the speech event or the narrated event. The exact nature of these reactions can only be tentatively reconstructed relying on the parenthetical. Similarly, the domain of the parenthetical can be determined only after the reaction has been inferred. Here it is crucial to emphasise once again that the boundaries of an utterance do by no means coincide with sentence boundaries, but are determined by the possibility of being answered (cf. section 3.2). Hence, a parenthetical may very well refer to linguistic entities such as paragraphs or texts (cf. Hinrichs 1983: 21; Voloshinov 1993 [1929]: 122).

Reactions to utterance concern *Es* or *En*, and thus trigger respective answers manifesting themselves as parentheticals indicating *Es* or *En*. Reactions and parentheticals referring to *Es* may concern the speech event as such (including speaker and hearer, who are not categorically separate entities) or the evaluative component, which is present in every utterance (cf. section 3.2). This latter fact is confirmed also by experimental data gained by Krause (2007), showing that evaluation is independent of the presence of lexical means. The parenthetical constructions in (12) refer to the speech event and its participants, those in (13) to the evaluative component:

(12) a. Но, **повторяю,** мы сейчас говорим о политике. (*Nezavisimaja Gazeta*, 1-23-2008)
'But, **I repeat,** we are now talking about politics.'

b. На фестивале, – **вы наверное обратили внимание,** — были совсем малыши. (2-10-2008)
'At the festival — **you probably noticed it** — were entirely young kids.'

(13) a. В конце своей речи Рюккер, **правда,** признал, что [...]. (*Pravda*, 1-22-2008)
'**True**, at the end of his speech, Rucker admitted, that [...].
b. $1 000 000 — это, **конечно,** не подарок. (10-5-2007)
'$1 000 000 — this is, **of course,** not a present.'

These examples show that reference to the speech event is carried out not just by a closed class of rather fixed expressions, but allows for considerable variation. This variation is, however, by far greater in case of parentheticals referring to *En*, cf. (14):

(14) a. Однажды к нам приехал неординарный парень — **Кристофер Уилдон** — англичанин, работающий в New York City Ballet. (*Izvestija*, 1-20-2008)
'One day an exceptional guy — **Christopher Wildon** — came to us, an Englishman, working at the New York City Ballet.'
b. Любой морж [...] знает, что какая бы температура воздуха ни была, вода даже при минусовой температуре **(соленая вода не замерзает при нуле)** все равно окажет согревающее воздействие. (*Nezavisimaja Gazeta*, 1-28-2008)
'Every winter bather knows that regardless of the air temperature, water still exhibits a heating effect even with minus temperatures **(saltwater does not freeze at zero degree Celsius)**.'
c. Говорить надо не о том, нужно изучать Луну или нет, — **ответ, да, безусловно нужно,** — а о способах ее исследования. (*Nezavisimaja Gazeta* 1-23-2008)
'We do not need to discuss whether it is necessary to study the Moon or not, — **the answer is, yes, of course, it is necessary,** — but the methods of its investigation.'

d. На втором этапе — **и об этом подписано межагентское соглашение между Роскосмосом и Индийской организацией космических исследований** — планируется совместная экспедиция на поверхность Луны. (*Nezavisimaja Gazeta*, 1-23-2008)
'At the second stage — **and an agreement has been signed about this between the Russian and the Indian organisations of cosmic research** — a joint expedition to the surface of the Moon is being planned.'

The parenthetical in (14a) provides an answer to an anticipated question concerning the name of that *неординарный парень* ('exceptional guy'); that in (14b) to a question concerning the physical properties of water. (14c) is interesting since the answering character of the parenthetical is made explicit also by lexical means. The parenthetical in (14d) reacts to possible objections concerning the plan of a joint expedition to the surface of the Moon. In all these examples, the indexical relation includes also additional information. This follows from the assumption of the parenthetical providing an answer to some reaction concerning the narrated matter as such. It is hard to imagine that such an answer would provide no additional information about its object *En*.

Actually, even with respect to parentheticals referring to *Es*, it is not that easy to find mere degenerate, or procedural, cases. One instance of such a degenerate index is illustrated in (15), which is an excerpt from an interview. Even though the addressee does not change in this passage, the form of addressing in the parenthetically used expressions varies — the familiar form, i.e. second person singular, in one case, and the polite form, i.e. second person plural, in the other. This points out that in this specific parenthetic use, lexically provided information plays only a minor role, if it plays a role at all:

(15) Они говорят / **знаешь** / вот / ээ / детская больница / которая напротив / потому что через дорогу / ээ / она всё это скупила / ээ / они снесли эти дома и построили какие-то /

ээ / корпуса. И когда они мне это сказали / **вы знаете** / я так расстроился / что я плакал хороших полчаса. (2-10-2008)
'He says / **you know** (2nd sg) / well / [...] And when they told me about that / **you know** (2nd pl) / I got so angry [...].'

Having introduced reactions to the utterance as the decisive factor triggering parentheticals, this assumption needs to be justified also on theoretic grounds. Moreover, it needs to be clarified, how these reactions can be integrated into the overall communication processes modelled in sign theoretic terms.

6. Semiotic embedding

In this section, the analysis of parentheticals elaborated above will be embedded into the Peircean framework outlined in section 4. This framework allows for an integrated account of the relation between the parenthetical and the utterance, covering also the implied reactions triggering the parenthetical. Moreover, the variability in interpreting this relation can be given a straightforward explanation. Figures 4 to 7 illustrate the argumentation step by step.

The speech event *Es* as the representamen *R* of the sign triad refers to some narrated event *En* as its object *O*. At the same time, *Es* brings about an interpretant *I* as its effect, or reaction, which is related to the same object, cf. Figure 4.

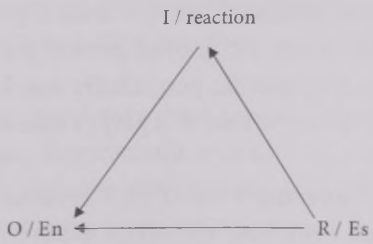

Figure 4. Interpretant I as reaction

In the course of the sign process, the interpretant of the first level turns into the representamen *R2* for the next step of semiosis. Since the interpretant is not merely related to *O*, but also to the relation between *R* and *O*, its object is more specific than the object of the first level (cf. section 4): the object of *R2* is the relation *R* — *O*, or *Es* — *En*, respectively. This *R2* not only refers to *O2*, but again brings about an interpretant, *I2*, standing in the same relation to that same object *O2*, cf. Figure 5.

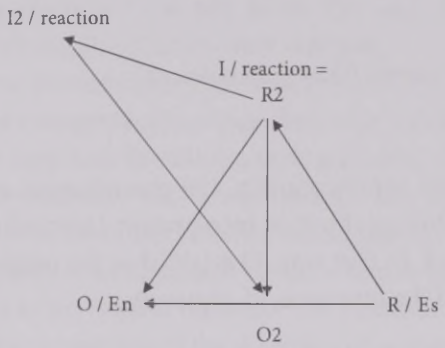

Figure 5. Interpretant I2 as reaction

And again, for the process of semiosis to continue, *I2* turns into a representamen, *R3*. In this specific case, *R3* corresponds to a parenthetical. That is, it is physically manifest — contrary to the reaction *R2*. This is indicated by the dotted lines in Figure 6, showing that both *R2*'s object and interpretant relation remain implicit. *R3*'s object is again more specific than that of the previous stage — *O3* consists in the relation of *R2* and *O2* (i.e. *Es* — *En*):

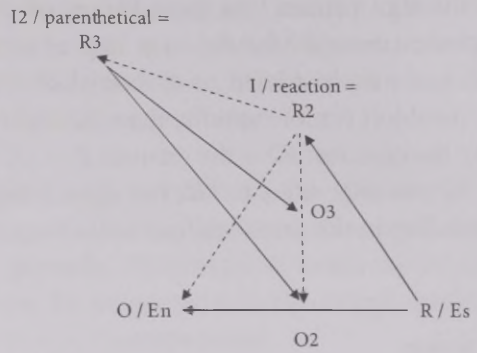

Figure 6. Representamen R3 as parenthetical

Just like any other representamen, the parenthetical not only has an object (*O3*), but brings about an interpretant *I3*, standing in a relation to the same object. In that way, *I3* establishes the relation between the parenthetical and the utterance, cf. Figure 7:

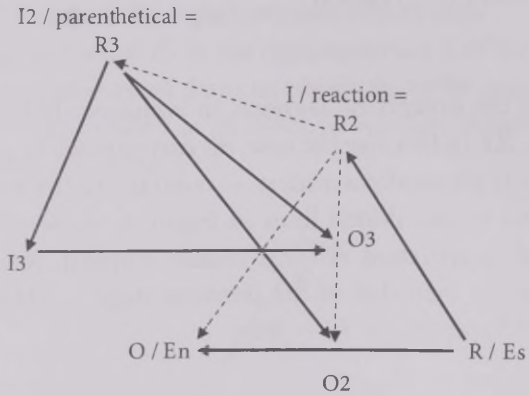

Figure 7. Interpretant I3 as a relation between the parenthetical and the utterance

The bold face lines indicate the relations brought about by the overtly present material. As can be seen, the parenthetical relates to both the implicit reaction and the utterance. As *I2*, brought about by the reaction *R2*, it relates to the relation between *Es* and *En*, i.e. the utterance (= *O2*). As *I2/R3*, it has a more specific object, namely the relation of *R2* to the utterance (= *O3*). In that way, the implicit reaction *I/R2* is brought in, as well as *R2*'s relation to the utterance on the one hand, and to the parenthetical on the other (indicated by the dotted lines). This illustrates how the parenthetical refers back (to *O3*) by implying a reaction to either *Es* or *En*, and at the same time provides a reaction (*I3*) to that implicit reaction.

The relation between the parenthetical and the utterance is established by the interpretant *I3*. Since there may be various such interpretants, there may also be various such relations, e.g., explanations, comments, amendments, etc. What remains the same for all these possible relations is the object referred to, namely *O3*.

Having developed the argument so far, it is now possible to explain the assumption of an implied reaction, the presence of the parenthetical, and for the conversion of the direction of reference. Since the reaction *R2/I* and its relations to *O2* and *R3/I2* (the parenthetical) remain implicit, it seems at first sight as if the parenthetical comes from somewhere out of space — a quite surprising fact. This surprising fact can be given an explanation by abductively inferring a triggering factor based on which the presence of the parenthetical follows straightforwardly. The most plausible triggering factor is some kind of reaction to the utterance — the implied reaction is inferred by abductive reasoning. Based on this assumption, several other factors can be accounted for. Despite the general variability displayed by parentheticals, there are restrictions concerning content and domain of application. These restrictions are determined by the specific kind of reaction that is inferred. The prima facie reversion of the direction of reference is a reversion only from the perspective of the current utterance — from perspective of the inferred anticipated reaction, there is no reversion, the sign process proceeds in its usual way.

This semiotic analysis thus illustrates how the parenthetical and the utterance constitute one complex sign: the parenthetical as a representamen refers to the utterance as its object, bringing about an interpretant relating both. This interpretant not only represents the indexical relation between the parenthetical and the utterance, but also iconically mirrors the complex relations inherent in this complex sign.

7. Final remarks

Based on the semiotic analysis elaborated in this paper, the function of parentheticals as relating different discourses can be derived from the dialogicity of signs and utterances.[20] It is this inherent dialogicity that can be identified as the more basic and comprehensive phenomenon of language that Schwyzer (1939) assumes parentheticals to be a part of (cf. section 1).

Parentheticals prove to be the central means to render explicit this inherent dialogicity. Anticipating reactions to the current utterance and at the same time reacting to these anticipated reactions by elaborating on one specific aspect of the current utterance, parentheticals illustrate how a speaking subject simultaneously acts as an addressee.

Implying some kind of reaction, parentheticals at the same time imply a change in the speaking subject, and hence indicate completeness and answerability of the utterance. Since both factors serve to

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[20] The semiotic analysis of parentheticals proposed here is interesting also in other respects, such as the question of subjectivity and its linguistic expression. Two main assumptions concerning the linguistic expression of subjectivity are ruled out by the analysis presented: the assumption of subjectivity being related to a speaker, and the assumption of subjectivity being expressed by the lexical content of certain words. Taking the inherent dialogicity of utterances seriously allows for another view on subjectivity — one that is based on, and emerges from, the difference between 'self' and 'other'. Since parentheticals make explicit both and bridge the difference by means of their interpretants, they can be said to reveal subjectivity as necessary consequence of the sign process (cf. Sonnenhauser 2008).

mark the boundary of an utterance, parentheticals can be said to anticipate the boundary of the utterance they take as objects. From the perspective of the current utterance, therefore, the parenthetical refers to the subsequent sign process. From the perspective of the parenthetical, this 'future' reaction is already past — in this sense, parentheticals synchronously encode both directions into which an utterance is embedded.

It is exactly this multi-dimensionality of the complex sign consisting of a 'host' and a parenthetical, that is so hard to capture for linguistic approaches which consider the linear precedence as the central principle for the organisation of language.

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Вставные конструкции и диалогичность знаков

Понятие «вставное предложение» используется для бесконечного числа разных явлений языка, у которых одна общая черта: их используют в качестве вставных внутри текста. В действительности, все же, не совсем ясно, что означает использование вставного предложения как в синтаксическом, так и в семантическом аспекте.

Учитывая, что большинство главных предложений, если не все, являются сами синтаксическими и семантическими единствами, возникает вопрос: какого типа информацию прибавляет вставное предложение в общую структуру?

Настоящая статья пытается объяснить основные функции вставных предложений путем их семиотического анализа. Этот семиотический анализ не призван заменить лингвистический подход (лингвистическую библиографию о вставных предложениях можно найти по адресу http://userpage.fu-berlin.de/~ndehe/bibl/parentheticals.html), а предназначен для объяснения того, почему лингвистический анализ вставных конструкций столь сложен. Статья исходит из динамического понятия знака и знаковых процессов (по следам

Пирса, Волошинова и Бахтина) и утверждает, что именно во вставных предложениях выражается внутренняя диалогичность знаков и высказываний. Лингвистические анализы, основной предпосылкой которых является двухмерная линеарность языка, почти никогда не учитывают эту диалогичность.

Kiillaused ja märkide dialoogilisus

Mõistet "kiillause" kasutatakse lõputu hulga erinevate keelenähtuste kohta, millel on ainult üks ühine joon: neid kasutatakse kiiluna teksti sees. Kiillause all peetakse tavaliselt silmas mingisse pealausesse vahele kiilutud teksti. Tegelikkuses on siiski ebaselge, mida kiillause kasutus tähendab nii süntaktilisest kui semantilisest aspektist.

Arvestades, et enamus pealauseid, kui mitte kõik, on ka ise süntaktiliselt ja semantiliselt terviklikud, kerkib küsimus, mis sorti informatsiooni kiillause üldisele struktuurile lisab? Teine analüüsiteema puudutab kiillause ja pealause suhet (selgitus, küsimus jne) ning seda, mis neid kahte koos hoiab.

Käesolev artikkel üritab kiillausete põhifunktsioone selgitada nende semiootilise analüüsi abil. Siinse semiootilise analüüsi mõte ei ole asendada keeleteaduslikke lähenemisi (keeleteadusliku bibliograafia kiillausete kohta leiate aadressilt http://userpage.fu-berlin.de/~ndehe/bibl/parentheticals.html), vaid selgitada, miks on kiillausete keeleteaduslik analüüs nii keeruline. Käesolev artikkel lähtub dünaamilisest märgi- ja märgiprotsesside mõistest (Peirce'i, Voloshinovi ja Bahtini jälgedes) ning väidab, et just kiillausetes väljendub märkide ja lausungite sisemine dialoogilisus. Keeleteaduslikud analüüsid aga, mille üheks põhieelduseks on keele kahemõõtmeline lineaarsus, ei võta seda sisemist dialoogilisust peaaegu kunagi arvesse.

A sketch of Peirce's Firstness and its significance to art[1]

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Abstract. This essay treats the growth and development of Charles S. Peirce's three categories, particularly studying the qualities of Peirce's *Firstness*, a basic formula of "airy-nothingness" (CP: 6.455) serving as fragment to *Secondness* and *Thirdness*. The categories of feeling, willing, and knowing are not separate entities but work in interaction within the three interpretants. Interpretants are triadomaniac elements through the adopted, revised, or changed habits of belief. In works of art, the first glance of Firstness arouses the spontaneous responses of *musement*, expressing emotions without the struggle and resistance of factual Secondness, and not yet involving logical Thirdness. The essential qualities of a loose or vague word, color, or sound give the fugitive meanings in Firstness. The flavor, brush, timbre, color, point, line, tone or touch of the First qualities of an aesthetic object is too small a base to build the logic of aesthetic judgment. The genesis art is explained by Peirce's *undegeneracy* growing into group and individual *interpretants* and building into the passages and whole forms of *double and single* forms of *degeneracy*. The survey of the flash of Firstness is exemplified in a variety of artworks in language, music, sculpture, painting, and film. This analysis is a preliminary aid to further studies of primary Firstness in the arts.

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[1] Revised and expanded for publication, this essay extends the argument of Gorlée (2008b) of *Sign System Studies*. Originated as an invited lecture about the semiotics of Peirce delivered at the University of Tartu (Estonia) on 13 November 2008, the lecture was followed by a seminar for participating students on 16 November, 2008 — Note that Bell's recent review article *Why Art?* (2009) appeared when this article was ready for publication in *Sign Systems Studies*. Unfortunately, Bell's ideas cannot be discussed here.

1. Dedication

This essay is dedicated to Professor Paul Weiss (1901–2002), who died in New York in July 2002 at the age of 101. In the 1930s, he co-edited (with Charles Hartshorne and Arthur W. Burks) the *Collected Papers* (CP) of Charles S. Peirce (1839–1914), a posthumous edition that became a beautiful adventure for modern semiotics. Weiss was widely regarded as an eminent scholar; his intellectual scope developed Peirce's way of signs into interdisciplinary philosophy, intermixing arts, religion, sports, logic, and politics. In his later years, Weiss published *Emphatics* (2000) and *Surrogates* (2002) about the innovative development of Peirce's Secondness and Thirdness respectively. After finishing these volumes, he worked on *Adjuncts* to analyze his version of Peirce's Firstness. Weiss introduced the term "adjuncts" in the last chapter of the book *Surrogates* (2002: 146–173), but the manuscript *Adjuncts* was left unfinished at his death. In contrast to Thirdness and Secondness, which seem to be understandable, Firstness means, beyond a doubt, a problematic sign to comprehend, since it is a virtual non-sign. In honor of Weiss' splendid work in semiotics, Peirce's Firstness will be the essence of this essay.

2. Peirce's three categories

At an early date, "after three years of almost insanely concentrated thought, hardly interrupted by sleep" (CP: 8.213, see Fisch 1982: xxvi), Peirce presented in 1867 to the American Academy of Arts and Sciences his paper, *On a New List of Modes of Categories* (CP: 1.545–1.559 = W: 2: 49–59). After preliminary explanations and decisions about the revision of Immanuel Kant's (1724–1804) "functions of judgment" that formed the "three affections of terms, determination, generality, and vagueness" (CP: 5.450) and even "adapting" Aristotle's (384–322 BC) ten categories, Peirce "discovered" his ontological categories: Firstness, Secondness, and Thirdness (Esposito 1980: 46–81, 82–121). According to his private *Logic Notebook*, starting on this day

(March 23, 1867), Peirce's categoriology remained close to his "deep emotion with which I open this book again" and he emphasized the importance to himself and his work when he added "I cannot forget that there are the germs of the theory of the categories which is (if anything is) the gift I make to the world. That is my child. In it I shall live when oblivion has me — my body" (W: 2: 1, see Fisch 1982: xxvi).

The three categories constitute the foundation of Peirce's body, work and thought, and all his other logical elements rest on his own threesome divisions, e.g., icon, index, symbol; qualisign, sinsign, or legisign; tone, token, or type, and further abduction, induction, deduction; term, proposition, argument; quality, relation, representation; unity, plurality, totality or, more concretely, images, diagram, metaphor; impression, conception, idea; term, proposition, argument; language, expression, meaning; sensibility, motion, growth; instinct, desire, purpose; flavor, reaction, mediation; suggestive, indicative, imperative; as well as other revolutionary and "evolutionary" terms of Peirce's triad terminology, moving from undetermined to determined motifs in all realms and disciplines. The categories were identified thus to be the innate idea of the activity of the human mind, and their mutual interactivity learnt; but they were also informing about the idea of acquiring knowledge to inform about the world at large — to become the inquiry of life and science from day to day.

There is a real connection between sign (Firstness) and object (Secondness), but thought — the interpretant (Thirdness) — looms large in Peirce's semiotics. Peirce's categories crisscross the postulates of the dual oppositions found in the Saussurean tradition of semiology, which Peirce dramatically revised with a non-doctrinaire receptivity of the semiotic signs surrounding us. Peirce's interpretant interpreted the sign and the object — but he stressed that the specific predication of the varying interpretants to the outside world proceeds "without altering the fact" of the object (MS 920: 46). The three categories interpret (and then transpose and translate) the data from one person to the next to imagine, perceive, and experience to make the interpretants in public reality. This is done with the function of guiding and stimulating further inquiry through the discovered qualities of

one inquirer to the community of scholars — Peirce's dream, his Firstness. The human mind is capable of transforming the formless data, surrounding itself in reality in humanized emotions and events in order to make a human world of a structured dynamic organ based on the three interpretants. This interpreting ability we need to outlive and survive the world as we perceive it in reality.

Echoing my earlier paragraphs about Peirce's three ways of perceiving and analyzing *facts* into categories (Gorlée 1994: 40–42) — this essay involves the fiction and fantasy of fine arts and will present a general *fact* in an extended version, that is some state of affairs, event, or episode, where fact is equated with certainty and truth (Rundle 1993: 9–18). Firstness happens, however, before a real fact within the qualitative immediacy of the sign in itself, a pre-sign not related to anything and anyone. In the arts, Firstness can be considered not as a functional, mechanical, or even a theoretical sign, but will stay a sign in its own aesthetic value that after observation and study can become a varying object of speculation and opinion. Kant's two-way division of casual and alert attitudes can refer to a musical sound as a functional or serious machinery. Weiss introduced the term "musicry" (1961: 122–125) to refer to the neutral and general type of musical compositions. Musicry concerns dinner-music (or today's elevator or telephone music) that serves as background noise to accompany the conversation at the table or during a waiting period. To such mood music one does not pay particular attention; it is mechanical *musicry*, subordinate to the domestic settings (MacCannell 1976: 192). Instead, aesthetic music requires listening to the composition as intriguing or beautiful music. Attending a concert, choir, or an opera performance gives sensuous pleasure to the listeners (Munro 1969: 166ff.; Ehrenzweig 1967: 21–31), and the attention can grow into their intellectual pleasure.

Peirce, who was for many years a member of amateur performing groups — he was a playwright, actor, producer, and director (Brent 1993: 16, 187; see Sebeok 2001: 9) — was interested but, however, no specialist in the arts. Yet he pointed to the more complex three-way division of semiotics in his interdisciplinary classification that can be

applied to the action and interaction of beliefs, responses and even judgments of different objects of music and other arts. In music, the division starts with the fine senses of Firstness — tone, pitch, rhythm, harmony, and tempo. The primary sign claims to sense the legend of the real thing — the so-called "tuone" as "a blend of tone and tune" (MS 339: 276, see Freadman 1993: 90) — but Firstness gives no guarantee of the existence of reality (Singer 1984: 105–114; Spender 1987: 504). In other arts, we find the same procedure. The meaning is at the beginning not logical but "only" emotional, a feeling. Logics are Peirce's goal, but logics start out as illogical Firstness, needing thus to be guessed at to arrive at some meaning whatsoever. Firstness is the hardest category to understand, in spite of the fact that it represents "pristine simplicity" and "*naïvité*" (CP: 7.551, 8.329).

Firstness means unanalyzed, instantaneous, immediate feeling of the sign. After observation, the receiver (seer, listener, etc.) offers direct "*suchness*" dependent on nothing else beyond itself for its comprehension. Peirce's suchness is the in-itselfness of the object-sign offering to the audience a possible "*maybe*" (or "*maybe not*"). Firstness is not (yet) a factual entity but exists only in the interpreter's imagination and is often a fictitious or hypothetical nonentity. Firstness is experienced in (Peirce's examples) the pure sensation of redness or blackness, the feeling of acute pain, an electric shock, a thrill of physical delight, the piercing sound of a train whistle, or a stink of rotten cabbage (CP: 1.304). We could continue with non-Peircean examples such as touching a piece of velvet, the sensation of hunger or thirst, and the feeling of sexual pleasure or displeasure, experienced in itself. Some aesthetic examples of the interpretants could switch from activity to receptivity, that shocks rather than stuns, moving away from Firstness.

Peirce's thrill set the violent emotions of the electrical effects, suggesting the pleasure, horror, or excitement of hearing the choral portion of Ludwig von Beethoven's (1770–1827) *Ninth ("Choral") Symphony*, and the *wohl-temperiertes Klavier* of Johann Sebastian Bach's (1685–1750) *Goldberg Variations* or, in other artworks, seeing John Everett Millais' (1829–1896) figurative lines of the charming

corpse of *Ophelia* from William Shakespeare's (1564–1616) *Hamlet*, as she falls into the stream and drowns, or seeing the abstract handling of the human figures to express the horrors of war in *Guernica* (1937) painted by Pablo Picasso (1881–1973) — all these works do reveal this radiance of the created object in moments of ecstasy. After the impression of beauty — including the unpleasing qualities of ugliness, both are signs of Firstness —, the work of art can then become "grasped into the unity which the mind requires, the unity of *I think*" (MS 357: 2 = W: 1: 471) in order to become an opinion, and then a judgment.

Firstness exemplifies any other artworks or the more functional (that is, non-aesthetic) common-sense impressions which are forced upon the human mind. Firstness compels the total sensory attention in order to give the artwork a pure and emotional meaning (Weiss 1961). Peirce himself also included in his list of Firsts "the quality of the emotion upon contemplating a fine mathematical demonstration, the quality of falling in love" (CP: 1.304). Firstness is thus the general idea of the timeless present instant experienced as the "pure emotion of the *tout ensemble*" (CP: 1.311); in arts, a feeling of the receiver (exchanging into an interpreter) into his/her direct yes or no to an artwork (a symphony, a sculpture, or a film), prior to any real thought on the object-sign. One cannot "think" (or "write") a real First, the words or thought themselves would take away the First's unpsychological essence of direct sensory experience. Since Firstness is a silent interpretant, writing an article about Firstness is a bit of a frustrating activity. In Peirce's terminology, the reader "seem[s] to attain the notion by a circumlocution, as what is not second, instead of apprehending First in its original virgin purity" (MS 906: 4).

Whereas Firstness means undivided and undividable oneness of the artifact, Secondness involves the dynamic time and space of otherness and its two-sided consciousness, the active experience of action to reaction, stimulus to response, change to resistance to change. The idea of hitting and getting hit is a true Second, since it contains what we confront, elements of polarity, interaction, comparison, and struggle. While a First is a potentiality, a possibility, "merely some-

thing that *might* be realized", a Second is a hard fact, "an occurrence [...] something that *actually* takes place" (CP: 7.538). According to Peirce, "the real is that which insists upon forcing its way to recognition as something *other* than the mind's creation" (CP: 1.325). Therefore, it is through the over-againstness of the brute side of Secondness that we face and deal with reality around us, and in this process of life acquire experience. Secondness offers strong opposition or weak resistance (muscular or intellectual opposition) against hard forces. All knowledge of the factual world and the more practical aspects of human life (such as opening a door, making a phone call, sending an e-mail, and kicking a football) are Seconds. Secondness is involved whenever we make an effort, a decision, or a discovery; when we orientate ourselves in time and space; or when we discover a surprise (CP: 5.52–5.58). Secondness differs from Firstness in that Secondness occurs *hic et nunc*, yet it must also be based upon the past and the lessons we draw from it. Peirce stated that "we may say that the bulk of what is actually done consists of secondness — or better, secondness is the predominant character of what *has been done*" (CP: 1.343).

Beyond the vague generality of Firstness, "a mere idea unrealized", and the definite nature of "real" Secondness, "the cases to which it applies" (CP: 1.343), Thirdness embodies continuity, called in-betweenness or mediation between the other categories. The intermediate rule of feeling and action by general principles provide logical explanations and all intellectual activity is primarily a Third — this includes the use (and abuse) of language, although it can be emphasized that art is creative and avoids the rules of Thirdness. Logical thought, Peirce's Thirdness, creates order, law, and regularity as opposed to (and out of) chaos, randomness, and chance, that is Firstness flowing over into Secondness. Peirce wrote that "The thread of life is a third" (CP: 1.337), since Thirdness mediates between the sign and its object. Since the assurance given by this mediation is concerned with continuity and generality, Thirdness is future-oriented and permits us (the cultural community) to predict what is to be, and to adapt our attitude accordingly. In art, mood (First) and fashion (Second) can

become cultural trends (Thirds). Peirce argued that Thirdness is the "eternal" value, judged again and again in the long run of human history. Thirdness is

> [...] not the kind of consciousness which cannot be immediate, because it covers a time, and that not merely because it continues through every instant of that time, but because it cannot be contracted into an instant. It differs from immediate consciousness as a melody does from one prolonged note. Neither can the consciousness of the two sides of an instant, of a sudden occurrence, in its individual reality, possibly embrace the consciousness of a process. This is the consciousness that binds our life together. It is the consciousness of synthesis. (CP: 1.381)

All "finer" feelings and "deeper" emotions such as love, hope, and religious devotion, which because of their sophistication are popularly considered to be peculiar to the human species are considered as Thirds. The same is true of cognition, intelligence, and mental growth arising out of unconsciousness to real consciousness, the so-called *black box* (Gorlée, forthcoming). This human duty is the threeway "sign-burden" (CP: 5.467) we handle with care or even manipulate with skill.

A threeway task of Peirce's categories can be exemplified by the religious "transformation" to devotees listening to the sound of a chapel bell (ex. *Chapel Bell* from *Choral Evensong* 1992; ex. *Bells: Tolling of the Knell* from *Requiem Mass* 1997; see Neville 1996: 133–144, 151–199), the first and main example of pure Firstness in music. The undetermined but intrinsic significance of the sound of the vibrating ringing bells is a devotional symbol. The repetitions of the monotonous sounds of the bells mark the call to the holy worship, taken over later by the determined melodies of the organ. The sounds of the chapel bell create a world of Firstness in the articulate space of the church, "detachable both from the world of everyday and from all objects, internal and external" (Weiss 1961: 172–173). If the "inward" bell sound is "recognized and generalized" (MS 1138: 16) by the listeners, the reference to the first "tolling of the knell" (*Requiem Mass* 1997) remains a spiritual boundary, fitting into the "outward" track of

the organ (Secondness) as the foundation of the superstructure of the *Choral Evensong* and *Requiem Mass* (Thirdness). The chapel bell passes its first threshold, crossing from a daily world into the different world of the sacred worship of God. In liturgical semiotics, a rite of passage transcends from the individual functioning of the man/woman/child's private emotion (First) to the belief of the human community (Second) until reaching the goal — the Third of the collective divine epiphany (or natural cosmos) (CP: 2.704, 6.446, also 2.261, 5.554; see Gorlée 2005).

In arts, a sophisticated example of the chapel bells is transmogrified in the work of other composers, such as the continuous drum sounds accompanying the choir music of *Ein deutsches Requiem* (op. 45) of Johannes Brahms' (1833–1897) Protestant oratorio (composed 1861–1868, first performance in 1869 in Leipzig), illustrating in the argumentative text that

> *Denn alles Fleisch, es ist wie Gras*
> *und alle Herrlichkeit des Menschen*
> *wie des Grases Blumen.*
> *Das Gras ist verdorret*
> *und die Blume abgefallen*
>
> (For all flesh is as grass,
> and all the glory of man
> as the flower of grass,
> The grass withereth,
> and the flower thereof falleth away.) (1 Pet. 1: 24)

This biblical passage is sung by the choral music, formally setting before us the vanity of man, but the nostalgic shade of the music is deeply tenored on the rhythmical sounds on the accompanying drum sounds, where cultural concepts do not exist and the bodily power of non-logical Firstness directly reproduces the approaching death (ex. Brahms 1964). As seen from post-Beethovian Romanticism, the mourning and consolation of Brahm's musical cantata strikes directly

at the external and internal expressions of the organic forms of meaning, as Firstness does.

Yet the chapel bell is fully repeated in itself in the modern "tintinnabuli style" of the Estonian composer, Arvo Pärt (b. 1935), now living in Berlin (Hillier 1997: 18–23, 86–97, and *passim*). The *Oxford English Dictionary* (OED 1989: 18: 131) defines the onomatopoeic term '*tintinnabulum*' as "a small tinkling bell". Pärt's later music — his *Fratres* (1977) and *Psalom* (1993) (ex. Pärt 1995, 1997) as well as his oratorio *Passio Domini nostri Jesu Christi secundum* (1982), *Stabat Mater* (1985) and other works — finds a new simplicity in the tonal harmony of the Firstness of religious music. His "tintinnabuli" music is, on the one hand, reminiscent of the chant of plainsong and Russian liturgical music; on the other hand, it probes beneath the smooth surface and, in the repeated melos, Pärt's spare and emotionally restrained tonality incorporates the sounds of the bell-ringing. The metal bells are formally filled with overtones and undertones in the highest and lowest register, yet the standard percussions of Pärt's music is never bound to high-style convention, but is the effect of his own intuitive Firstness. His "tintinnabuli style" seems engaged and committed, but also breathes a kind of forlorn pointlessness, a desperate boredom. Pärt's musical project is also a good example of the tendency to jump over Secondness and Thirdness, bringing to mind a carefully cultivated image of the minimalist role of Firstness in the genesis of art.

In the 1960s art world, minimalism, a modern trend in response to Abstract Expressionism, was the idea of doing more with less. The term particularly refers to "work with a usually low degree of differentiation, which is to say a monochromic (or nearly monochromic) canvas or a piece of music composed with only a few notes, ideally to suggest, at times by critical inference, meanings that would otherwise be unavailable" (Kostelanetz 1993: 147; see Baker 1988). The definition of minimalism would be "synonymous" with Peirce's skeletal idea of Firstness.

3. Triadomany

In a late essay (from 1910) Peirce confessed, tongue-in-cheek, that he might be suffering from a "psychiatric" disease called "triadomany" or "trichimania" — in his reply (or auto-reply) he wrote of "the anticipated suspicion that he [Peirce] attaches a superstition or fanciful importance to the number three, [...] he indeed forces the division to a Procrustean bed of trichotomy" (CP: 1.568 = MS 902: 2). Peirce's response to the suspicion was negative: he stressed that he had no natural predilection nor a passion for trichotomies, and that in his logical division he spontaneously came out to the number three (CP: 1.569 = MS 902: 3ff.).

First, Peirce's all-inclusive remark concentrated on artificial objects or "things" in themselves, with their utilitarian function with a naturalistic basis, and representing an aesthetic, psychological nature in the attitude taken by the observer towards recognizing and precluding "all laws, fashions, and styles of every kind, as well as powers, offices, institutions, and appropriations (such as roads, cities, resorts), as well as all works of literature, musical compositions, and exhibitions, although it leaves included books [...]" (MS 902: 12).

Peirce wrote that this unusual collection of various artificial objects was "dead" material (CP: 1.358, 6.201) but he classified them to use them for the purely functional, propagandistic, and educational "purposes for which the different things are made" (MS 902: 11, 14 in a MS paragraph deleted by Peirce; see Munro 1970: 269–293). The first task of the aesthetic experience of these objects of art is made of "heaps of slag and other waste material, and *rubbish*, which may constitute the first class" of what Peirce called "ornaments" (MS 902: 15, 14; see CP: 1.281, 5.392, 8.14). After this emotional experience of Firstness would arrive "separate those things which directly minister to our primary needs or desires" (Secondness) which implies that the "thing" can become the object of attention and interested contemplation. In a third class, then, we face "things which directly ensue us to achieve results, which results, however, taken in all their generality we have no decided natural desire to achieve for their own sake, such as to

generate or concentrate dynamical energy, or to make shoes" (MS 902: 15–16) or other common-sense objects to distinguish art from science and other fields. Secondly, Peirce's taxonomy of zoology treated living things of the living animal kingdom in a limited (dyadic) division of lower or less-developed and higher and more-developed parts (Firstness and Secondness), since the human inquirer is unable to see and investigate all genre-specific details of the future of the species of flower, animal or man. This inept application of the ongoing historical development means that a triadic analysis (the trichotomy) of the history of living things remains purely speculative (MS 902: 20–23).

As argued later by Schneider (1952), the possibility of Fourthness is not real but merely a virtual reality. Since the ubiquitous system of Peirce-like "triangulation" (Schneider 1952: 209) seemed not to Schneider's taste or mood, he added to Peirce's cognitive triad of "individuality, causality, and import" a fourth grade: "importance" (Schneider 1952: 210). Adding such a measure of value, the "existential completion, enjoyment or consummation" (Schneider 1952: 211) would demand a last fourth phase, dealing with an ultimate state of satisfaction. In philosophy, human satisfaction is paid in happiness and is a fixed goal in empirical life, but semiotically, things *are* not what they are but what they could become. The final happiness has no real place in Peirce's pragmatic dynamism, where things are not what they are but what they *stand for* to an interpreter (or various interpreters), in the attempt to develop with ups and downs the total community of interpreters. Firstness can suggest a partial (visual, auditory, etc.) satisfaction to the interpreter, but in Secondness and Thirdness the empirical experience is mediated to a varying conceptual experience of factual and logical evidence. This makes that the sign-action (beliefs) of sign, object, and interpretant can vary and change in time and space.

Peirce's interpretants can thus have complex, irregular, and unstable meanings, becoming more than primary and secondary sign-appearances, semioticized for a certain time and space in the outside world. The teleological or purposive harmony of the creative process of sign-action (CP: 2.108, 5.494, 6.156, 6.434, 7.471, 7.570, 8.44) gives non-conservative thoughts between words and ideas, but still has a

final outcome, "semiosis". But, in Peirce's sense, semiosis is never definitive, but can be repeated again and again in time and space, representing the final judge now, and then taking a risk, or maybe adopting a different interpretant from the hands of other interpreters or analysts. Semiosis remains (and will utopically remain) an ideal for the future. Peirce's note of gladness announced however that the "same division" of three trichomies would name an element "*tetramerous* (or a *tetratomy*), if one does not mind the *cacophony*, or *dysphony*" of four parts (MS 902: 16). The categories can be repeated and "with larger numbers [can] multiply astonishingly" (CP: 4.309) but our logical habits remain three and the fourth is imaginary and "can be dispensed with altogether" (CP: 3.647; see 1.363, 1.169, 1.391f.). Peirce related Fourthness back to Third in the company of Second, and First, thereby blurring away a higher idea of division of more than Thirdness (CP: 1.292).

The trigamy of Peirce's categories — feeling, willing, knowing — refers not to separate entities in his three-step inquiry but knit the elements in a togetherness through the adopted or chosen *habit of belief* (CP: 5.476ff., 5.491; see Fisch 1986: 29, 93ff., 189). In Peirce's pragmatism (from the year 1870), a habit of belief is pluralized into habits of belief, since we can locally and temporarily fix a belief in the types of regularities and irregularities we discover in the all-inclusive study of the sign and its object, and to embody the old and new sign-interpretations in the sensuous, volitional, and habitual interpretant (CP: 2.643). The togetherness of the categories generates outward the immediate (emotional), dynamical (energetic), and final (logical) interpretants. The single and complex signs (Firstness) are only knowable by studying their objects, and need an intelligent interpreter (or agent) to be understood.

The presence of signs gives a special attention to the inner thought they require to be rightly understood. These terms indicate technical synonyms of the semiotic sign and refer to Peirce's definitions of a semiotic sign as having (in a preserved copy of a letter to Lady Victoria Welby of July 1905) "a character with the idea of being quite roughly like something, or the rough impression that experience of a thing

leaves upon the mind" (SS: 194). Peirce gave Lady Welby the following working list of italicized sign-characters:

> 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. (SS: 194)

The inventory of semiotic signs is, as Peirce added, "rich in words waiting to receive technical definitions as varieties of signs" (SS: 194) in order to mix, as Peirce seemed to join in his list, the combined and interactive elements of Firstness, Secondness, and Thirdness.

As a correlate to the triadic sign, Peirce related to two objects, distinguishing between the immediate and the dynamical objects (Savan 1987–1988: 24ff.; Gorlée 1994: 53ff.). The immediate object is the explicit and known ("inside") object, taken at face value (Firstness of Secondness), whereas the dynamical object is implicit, a real but unknown ("outside") object (Secondness of Secondness). The total sign-object is not fixed, but a possible or indeterminate fact, with limits "between true and false, correct and incorrect, acceptable and unacceptable, in the functioning of the object [...]" (Savan 1987–1988: 27). The dynamical object elicits the "secret" information and informs the sign "by a hint" of the immediate object (SS: 83). The dynamical object, or the object in itself, abstracted from its role in a particular sign-use, is the sum total of all the instances of the immediate object.

The dynamical object can be studied by "unlimited and final study" (CP: 8.183) of the diacritical marks of the immediate object in all its spatiotemporal contexts, and may become the end study of a semiosic process of sign actions. The discovery process arises from an intellectual curiosity of the interpreter or analyst to doubt, and change the habit, and eventually to find the truth (CP: 5.370–5.387). The semiotic panorama includes more than a mere representation of personal thought, but is the intimate, close and thinking relationship of three logical and illogical elements to signify the liaison perceived between sign, the object it stands for, together with the implications of the interpreted or translated interpretants. The interpretants can be right or wrong, suppressed or distorted, and so forth. In the end, this means that the true opinion (the truth) is unavailable in our human inquiry; despite our abilities we cannot solve the world's problems.

The series of Peirce's immediate, dynamical interpretants, as well as the final interpretant (also called the emotional, energetic, and logical interpretants) presents three kinds of reasoning (Firstness of Thirdness, Secondness of Thirdness, Thirdness of Thirdness) (Savan 1987-1988: 48ff.; Gorlée 1994: 56ff.). The first trio (immediate, dynamical, and final interpretants) is limited to the stages of the interpretive process, and the second one (emotional, energetic, and logical interpretants) indicates the sign-action from the perspective of the interpreter or agent — in the arts, the threeway belief (Firstness), argument (Secondness) and the judgment (Thirdness) of the listener and seer.

The mix of the three categories incorporates both conventional and unconventional statements to express the truth as a basis for negotiation or action. The three categories are approached not as a metaphorical recipe or a fixed prescription in language: in Weiss' (1995: 4) view, the expression of human "volitions, assessments, idiosyncrasies, love, faith, action, creativity, or evil [...] could be squeezed into formulae or put under categories" only if seen loosely or separately. Weiss, however, examined in his cooperative project the context of other things surrounding the object. He wrote that

> What is needed in order to know what is real is a study that acknowledges factors whose existence and operation are evidenced everywhere, both in what can and in what cannot be formally stated, investigated, or understood. Account should be taken of the private as well as the public, of the trivial as well as the splendid. Nothing less than a wise-ranging, sinuous, defensible account could provide what is needed. (Weiss 1995: 4)

Some things can be analyzed in one category, seen from without or within, but most things or objects can have connections to more than one category at the same time and in the same space. Peirce was fully aware of the varying connections and he stated that

> Viewing a thing from the outside, considering its relations of action and reaction with other things, it appears as matter. Viewing it from the inside, looking at its immediate character as feeling, it appears as consciousness. These views are combined when we remember that mechanical laws are nothing but acquired habits, like all the regularities of mind, including the tendency to take habits, itself; and that this action of habit is nothing but generalization, and generalization is nothing but the spreading of ideas. (Weiss 1995: 4)

A practical example of Peirce's habits of belief could be one of the most popular literary forms, a "biography" which is both fact and fiction. A biography gives a storied account of another person's life, such as Florence Nightingale (1820–1910), Winston Churchill (1871–1947), Queen Elizabeth II (b. 1926), Barack Obama (b. 1961). A biography is basically a flexible use of a Third: it can be a full account (when possible) of an individual, but its elements can also express some fragmentary elements, building on a report of special adventures (Second) or the thought (Third) of the individual. The account can be a written narrative (Third) but can also be (or include) illustrated material (First) or a filmed account (Second) of someone's life. The biography can narrate an artistic (First), dramatic (Second), or intellectual (Third) history of the person. In *My List of Great Men*, Peirce treated *Men of Feeling, Action, Thought* (W: 5: 32–358; see the whole *Study of Great Men* in W: 5: 25–106, introduced in CP: 7.256–7.266) with alas! only a handful of women included as personal icons.

The life of the biography forms an emotional, actional, or logical guideline for the readers, contributing to their individual or social re-creation. A biography is often a biographical "novel" with special attention not to routines or rules but rather to special efforts of one famous individual, often composed after his or her death to qualify as a nuanced personality portrait.

The sources of the fidelity of the biography can be a fictional and non-fictional account, derived from the person's own souvenirs, words, letters, and photographs (Firsts) of the person including the assistance of firsthand information, interviews with family members, colleagues, and so forth, and a number of documentary biographical appurtenances of materials from the archives and the press, totalling a mingling of Seconds and Thirds. In the biography, the individual is often considered to be an experienced, wise, and aged hero or heroine (First), but the biography mainly expresses not Firstness but the narrative of the experiences in time and space (Second) or the historical events (Third) he or she played a role in. The life described can either be a personal life of his or her private character (First), as well as the occupation and temperament (Second) and milieu and field of endeavor (Third), or its joint combination in experiences and activities rescued from oblivion or human forgetfulness. The interplay and exchange of Peirce's triple view makes for all kinds of ideological, intimate, official, critical, memorial, recollective, etc. kinds of biography (and autobiography), presenting accounts of all sorts and with uncommon and alternative events revealing a compounding of genuine signs and less complete or deteriorated signs (Gorlée 1990), joining all categories together into one.

Not to overstate the triple view of the categorical case, we use not facts but also fictions to make our attention to concrete and abstract things in real and imagined reality useful within Peirce's triple view. Peirce himself wrote that he used certain "arts" in the categorical project, when he undertook

> [...] to look directly upon the universal phenomenon, that is, upon all that in any way appears, whether as fact or as fiction; to pick out the different kinds of elements which I detect in it, aided by a special art

> developed for the purpose; and to form clear conceptions of those kinds, of which I find that there are only three, aided by another special art developed for that purpose. (NEM: 4: 51)

Arguing the "artistic" (or maybe game-like) point from scratch, the things we study can embody one category, or we can split the things into sections in order to create a flow of elements into different things, corresponding to a variety of sections in the "game" of categories (Merrell 1991). The sectioning of the desire, will, and experience of signs means stressing one strong element accompanied by two weaker sub-elements in Peirce's term, *degeneracy* (Gorlée 1990), as discussed later. In this fashion, the triadic paradigm is found by Peirce in all kinds of phenomena which run the whole gamut of the history of theology, science, physics, biology, and mathematics to achieve, when possible, the truth of his logical theory of signs to be the fullest by far — but always integrating illogical Firstness as the first background.

4. The work of art

John Dewey (1895–1952) wrote in *Art and Experience* (1934) about the deep "emotion recollected in tranquillity" perceived in coming face to face with the beauty of art objects, saying that

> Works of art often present to us an air of spontaneity, a lyric quality, as if they were the unpremidated song of a bird. But man, whether fortunately or unfortunately, is not a bird. His most spontaneous outbursts, if expressive, are not overflows of momentary internal pressures. The spontaneous in art is complete absorption in subject matter that is fresh, the freshness of which holds and sustains emotion. [...] But an expression will, nevertheless, manifest spontaneity if that matter has been vitally taken up into a present experience. (Dewey 1934: 70)

Firstness concerns Dewey's "operation of doing and making" of art objects, his *poiesis* (Dewey 1934: 256) to sharpen the focus of the seer on the aesthetic side. Yet the artistic *poiesis* is not limited to Firstness and must reach further to Secondness. Starting with the nascent sign

of *autopoiesis* (or semiotically, *autosemeiopoiesis*) the sign reaches the real aesthetic material object. Significantly, the cry might be taken from Edvard Munch's (1863–1944) ambiguous one-syllable word *Skrik* — the title of his painting was accurately translated into German as *Geschrei*, yet the cry spreads into English over the more traditional two-syllable words (article, noun) of *The Scream*. *Skrik* cries out loudly to the audience, and the sentiment of anguished Firstness is transformed into the real Secondness of Munch's painting.

Firstness produces a "self-reflexive, self-referential, relatively autonomous" (Dewey 1934: 256) sensuous image in the human brain. The impression visible (audible, touchable, etc.) in Firstness experiences the qualities of the sign, actually those of a non-sign, regardless of the sign material (language, image, sound) and lacking part of the object material and part of the interpretant material. The qualities of Firstness are taken "*in itself*" (Dewey 1934: 256; see CP: 2.254, 2.276, 5.73) and refer to the dream-like sense of color, tone, flavor, and some points of details as seen or improvized by the receiver or viewer (see CP: 1.305ff., 1.418ff., 1.484, 1.551f., 2.374ff., 5.402, 5.369, 5.395f., 6.18, 6.198f., 7.530, 7.538, 8.335; NEM: 4: 18, 30). The attention of Firsts does not yet reach to see the contrasts, motives, ideas or functions that belong to Secondness and Thirdness. As Merrell said (1991: 3), in Peirce's view the qualities of Firstness refer only to "'atoms'" experiencing "discrete items of experience", in other words, they do not reach separate "things" and not "events" (Secondness) or "processes" (Thirdness). The ungrounded information of the fiction and fantasy of Firstness provides "no perfect identities, but only likenesses, or partial identities" (CP: 1.418). The information is therefore neither true nor false, but gives a kind of vague significance or, semiotically, a weak "reasoning" of the feeling, as we perceive in the futility of Peirce's "musement" (CP: 6.452–6.493).

As argued before (Gorlée 2004, 2005, 2007), Peirce's term, musement', is the speculative and intuitive way of looking at a work of art. Musement is a viewer's view, a First (of Third through a Second). Its idea of playfulness gives a certain "reverie with some qualification" (CP: 6.458) to describe the exercise of art as consisting of different

shades of Firstness — First, Second, and Third — of meditative thought. Peirce spoke about its "Pure Play" (CP: 6.458) as the first mode of intellectual or scientific reasoning in the state of mind of his term of musement. The task of Peirce's muser is to freely see, hear, touch, and so forth, a puzzling object, phenomenon or event. The investigator's assumption gives an unthinking, intuitively formed, and spontaneously chosen personal belief, working with no plan or strategy but spontaneously supplying his or her plausible hypothesis for the observed work of art. The musement of the whole work and its more detailed formulations of the work of art deal with the inquirer's musing, self-returning inwardized thought, to catch our own likeness, both physical and spiritual. Musement is a creative response, even a caricature of the sign we face, a belief indulging in a daydream without spending "real" time in the "idle" activity. The playfulness is loose and free of responsibilities, since musement stimulates indifference to the methodological imperatives that we are deeply concerned with in our daily lives. The muser embodies his or her own dream version subversive of ordinary life. In Peirce's view, logical beliefs and opinions start with this drifting and fluctuating dream, a vague, unseen, incoherent feeling to arouse the real semiosis in the further categories.

The work of art combines the apparently logical with large doses of the absurd. The non-sign is no more than a minimal shape, for Peirce a primary "airy-nothingness" (CP: 6.455), a first "possibility, then, or potentiality, [as] a particular tinge of consciousness. I do not say the possibility is exactly a consciousness; but it is a tinge of consciousness, a potential consciousness" (CP: 6.221). The waking consciousness of the paradoxical Firstness of the art object is a sleeping consciousness of the muser. But the muser reads some traces of Firstness in the work of art and adds to and explores the musing dream between satiety and mystery. In the dramatic *mise en scène,* the artwork reaches through the qualities explored a spontaneous Firstness, but often an intensified Firstness, reaching forward to hypnotize about the relationship between other and oneself (otherness and selfhood). There is some repulsiveness and fascination in the first glance of the "raw material" of Giovanni Lorenzo Bernini's (1598–1680) baroque sculpture of the

Ecstasy of Saint Teresa (1652). The qualities of the Spanish saint stand out in the chapel of Santa Maria della Victoria in Rome. Animated by her own body, she "moves" forward in a theatrical light. Saint Teresa's body is engulfed in religious meditation with eyes heavenward rolling. The realism of Bernini depicts the bodily qualities of her orgasmic pleasure — in the company of a smiling angel.

In pop-art, Andy Warhol's (1928–1987) film *Blow Job* (1964) sees the images in the Andy Warhol Museum (Pittsburg, PA, USA) in order to observe in this film an aesthetic factor of rhythm and harmony. Through the viewing through a cinematic "keyhole" the voyeuristic close-up picture-qualities of head and shoulders of an emotionally (or erotically) aroused man moves the viewer not to criticize or to reject him in his intoxicated state (Gidal 1977: 111). Mystical or meditative picture-qualities conjure up the sensory stimulus in artistic life, sought not through didactic knowledge, but intimately touched with beauty and transformed by lust and passion, or perhaps drifting into the vacuum of fatigue, boredom, sexual excess, or drug addiction. Firstness frequently exudes sexual and sinister images of an ambiguous and a hidden note of "pornography".

Portrait sculpture indulges our taste for the timeless beauty of the human face and body. The art of multiplication may be able to depict the logical "truth" (Third) but not without indulging in the illogical and paradoxical enchantment of the heart (First), as seen in the examples (Second). In the reality of fine arts, Secondness is a central figure of "organized" beauty, impersonally shaped in three or two dimensions in stone, ceramic, bronze, or wood, or pictured in two dimensions in a photograph, film, or painting, as well as in "one" dimension (or dimensions) in music. The visual aspects of the images tell the story of aesthetic pleasure (and impleasure) to make visible the personal narrative — the *coloratura* (or vocal color and timbre) — of the "melodic" ornamentation from model to artist (sculptor, painter, photographer, and so forth) and to be able to create interpretants of the viewer (spectator, listener, and so forth). Outside the material and the context used, the silent visibility of the qualities of Firstness is turned flesh in the shameless and barefaced representation of dead Ophelia

floating in the river, the Christian nun's intimate carnal love to Jesus Christ, and the brash intrusion on a drug addict's private sphere.

Beyond the mastery of art works, we can enjoy musement in the humming of the washing machine (*Wunderbarer Waschsalon*, 1994), an appliance with the rotating movement of the basket and the balancing water, seen through the cosmic round door. The washing machine, with its warm temperature, pleasing scents, and silent pauses between the phases of the machine, provides a spatiotemporal division and cleaning combination from dirty to clean laundry — a day-dreaming adventure or cosmic meditation to counter the meaninglessness of life. In the launderette, the body and mind of the muser's ego is spiritually cleaned in the unconscious and uncontrolled musement, emptying the mind through a dreamy act of love, concentrating on nothingness and integrating the onlooker into the wholeness of the universe of discourse. Musement is exploring a supreme quality felt by the "artist" corresponding to the primary "*suchnesses*" (CP: 1.303–1.304, 1.424) of the emotional and expressive attitude of *abductive* Firstness — integrated with the factual reality of inductive Secondness and maybe the logical law of mind of deductive Thirdness — to push forward to Peirce's meditative wholeness of semiosis.

Summarizing the experience of Firstness versus the other categories, Firstness concerns the "[f]eeling-qualities, or sensible qualities, either unobjectified or attached each to an object. In themselves, they are not definitely objectified, since they involve no reflection whatever, and therefore no thought that they are within or without" (MS 1135: 15). For comparison with Firstness, Secondness is more than feeling, but counters the artistic "measure" of spatial and temporal dimensions in the arts (dance, music, sculpture, painting). Secondness is the "[c]onsciousness of effort and resistance [and provides] essentially a consciousness of a *within* and a *without*, correlative to one another" representing "here and now, differing in this from the qualities which are not definitely located" and "[f]rom this kind of consciousness are derived the ideas of brute force, reality, existence, relation, etc. Under this head I place all the common experiences of life, all that is real to all men" (MS 1135: 15).

Secondness integrates Firstness but is again contrasted with Thirdness. Thirdness must integrate Secondness and Firstness, and involves dynamic and compound interactive forms of art (film, opera). Transposed into logical forms, Peirce wrote that Thirdness is

> Consciousness of something as a medium between two things. This involves the idea of intellectual pertinence "involving" the idea of a rule of thought. Thus, if A gives B [to C], the A is a sort of medium between B and C, unless what is meant is merely that A lays down or throws away B and that as an unsettled fact C takes B, — in which case there is no genuine mediation — then the essence of the giving lies in a psychical act by which A communicates to C the idea that B is to belong to him. If A shoots a bullet into C, and is in anyway responsible, he at least *ought* to have *thought* that the bullet would reach C. Thus every triadic relation moves consciousness of thought. This sort of consciousness is involved in all scientific knowledge, or knowledge properly so called. (MS 1135: 15–16).

In the work of art, Firstness is affective or qualitative "thought", or better non-thought, that gives no real information or knowledge but a virtual quality of the first emotion felt (German: *erste Empfindung*). Like a non-sign intuitively affiliated to existing signs, the intuitive quality can be transferred upwards to the wholeness of the interactive categories. Firstness is, as previously described, a fragmentary sign or *zero* sign, but is still "dense, vague, and pregnant with promise" (Savan 1977: 179) to crystallize into Secondness and Thirdness. For Peirce, a zero element is a "negative of quantity" of meaning, but has a special quantity, which is "no violation of the principle of contradiction: it is merely regarding the negative from another point of view" (MS 283: 109). The zero sign is itself a sign of emptiness, but its radiance points in some discontinuous direction. Nothingness will stay muted in reasoning until "*existing*" in Secondness, reknitting the '*imagined*' Firstness (CP: 8.357) in reality. Pure Firstness "signifies a mere dream, an imagination unattached to any particular occasion" (CP: 3.459), whereas practical Secondness serves to "denominate things, which things he identifies by the clustering of reactions, and such words are proper names, and words which signify, or *mean*, qualities" (CP:

4.157). The meaning of the simple lexical, musical, pictorial, etc. form, Peirce's iconic *replica*, can become repetitive, involving a hardening of the soft and controversial separation and connection, difference and sameness; trying hard to accommodate to the jointure of one category to another. Firstness and Secondness decided to join "brick and mortar" (CP: 6.238) to define the physical change in Peirce's architectural framework, the "clay" of the logical meaning of single signs depends on the critical thought to enlighten the specific pragmatic contextualization. Then, within the real context, the simple unit would be upgraded to become an actual "building" message.

In Peirce's logical semiotics, the upgrading "grounding" sign-shades of qualisign, sinsign, or legisign (CP: 2.243f.) — also called tone, token, or type or, more concretely, images, diagram, metaphor — include "a mere idea or quality of feeling", an "individual existent" until a "general type [...] to which existents may conform" (MS 914: 3) in accordance with the order of the three categories. Tone (image, qualisign) is the mere sign itself, token (diagram, sinsign) is the object-oriented sign, and type (metaphor, legisign) is the ruled sign, often in language (Savan 1987–1988: 19–24; Gorlée 1994: 51–53). Transposed into musical signs, Firstness is called "tone", Secondness "passage", and Thirdness "piece". In painting and sculpture, we can call the categories "point", "line", and "composition". In *Languages of Art*, Goodman (1985: 177–221) spoke of "score, sketch, and script", which can be transposed to other arts. Bayer (1986: 9 and *passim*) has characterized it in this way "*Punkt, Strich, Linie und Flache*" (whereby "*Strich*" and "*Linie*" may be synonymous) and his repertoire of artistic sub-signs are characterized as "*Farb-Form-Einheiten*" and "*Figur-Grund-Differenz*". Speaking about the clarity of things in painting, Updike (2008: 14–16) mentioned the "touch", "sweep" and "dash of the brush" to depict the clarity of "painterly" things.

Peirce's zero or "*blank form*" (CP: 8.183) of the meaning-pictures of the loose word, sound, smell, or touch is a simple speculation of Firstness we make, "unattached to any subject, which is merely an atmospheric possibility, a possibility floating *in vacuo*, not rational yet

capable of rationalization" (CP: 6.34) and unrestrained at first by concerns for logic and accuracy. Peirce wrote that

> [...] when man comes to form a language, he makes words of two classes, words which denominate things, which things he identifies by the clustering of their reactions, and such words are proper names, and words which signify, or mean, qualities, which are composite photographs of ideas and feelings, and such words are verbs or portion of verbs, such as adjectives, common nouns, etc. (CP: 4.157)

Consider the creative versatility of the linguistic use (or abuse) of "dirty" four-letter words, such as the tabooed expression "fuck you", which can describe, just by its First sound, pain, pleasure, love, mating, and other sensations, depending on the contemporary or historical context; such as "Oh, fuck!", "Holy fuck!", "How the fuck are you!", "Fuck me!", "Fuck you", "Where the fuck are we!", "Who gives a fuck?", "Fuck George Bush!" as well as the last words of General George Armstrong Custer (1839–1876): "Look at all those fucking Indians" and, last but least, the immortal words of the Captain of the *Titanic*: "Where is all this fucking water coming from?", after the collision in 1912 with an iceberg in the Atlantic, when the ship rapidly filled with water and could not be saved (Montagu 1967: 307–315, Arango 1989: 16, 119–123, 143–157). It seems that the custom of swearing by the purely verbal but non-thematic utterance of four-letter-words gives a content of positive and negative ideas.

Steiner observed that "nonsense poetry and prose, nonsense taxonomies, and nonsense alphabets of many sorts are an ancient genre often active just below the surface of nursery rhymes, limericks, magic spells, riddles, and mnemonic tags" (Steiner 1975: 187). The universe of nonsense languages consists of bits of pure Firstness, accumulated towards the pseudo-series of nonsense-speech. As example, see the naive children's poems, such as

> Eeny, meeny, miny, moe
> Catch a tiger by the toe
> If he hollers let him go,
> Eeny, meeny, miny, moe.

Peirce called the counting rhyme "children's gibberish" with "gipsy numerals [...] employed in counting nearly as the cardinal numbers are employed" (CP: 4.155). Nursery rhymes give an illogical and nonsensical Firstness, but despite the trick test of free speech they still have inarticulate violations of form and shape, and they have an expressive meaning. Yet these meanings are the primary signs of pure sensory delight of the game, but with a fierce attachment to a vague and futile quality to further in the upcoming categories. Firstness can be repeated and is thus unfolded in actual Secondness with a direction of time and place, turning into a fluid flow of interactive signs and sounds, Peirce's pseudo-Thirdness. Other linguistic and poetic examples of Firstness, derived from Peirce's interactive categories, would be a possible analysis of twentieth-century stage plays. Consider the mysterious atmosphere of Samuel Beckett's (1906–1989) dramas (*En attendant Godot* 1952, *Waiting for Godot*, transl. by Beckett, 1954, and other plays), the absurd economy of Harold Pinter's (1930–2008) stage plays, and other plays. The ambiguity of "Serio-Comic Groping" (Booth 1974: 212, see 257–267) evolves from or into the "prerational darkness and chaos" (Coetzee 2008: 15) of the voices of Firstness, as a preliminary "program" to enjoy and use the ironic inversion in the act of creation.

5. The genesis of the artist

Firstness happens in sporadic signs, and can develop into the episodic scenes of Secondness (in jargon, proverbs, epigrams, quotes, sayings, haikus, etc.). After weighing the weak meaning of the sporadic non-sign out of context, the historical evidence will give anecdotal impressions to see the meaning of some aesthetic (and non-aesthetic) artifacts and their context. Eco's historical *exposé* states that

> At first contact and first reaction, exhibitions assume the form of an inventory, an enormous gathering of evidence from Stone to Space Age, an accumulation of objects useless and precious, an immense catalogue

> of things produced by man in all countries over the past ten thousand years, displayed so that humanity will not forget them. (Eco 1987: 292)

Eco's "catalogue of things" is named as

> Spires, geodesic domes, molecular structures enlarged millions of times, cathedrals, shacks, monorails, space frames, astronauts' suits and helmets, moon rocks, rare minerals, the King of Bohemia's crown, Etruscan vases, Pompeian corpses, a Magdeburg sphere, incense burners from Thailand, Persian rugs, Giuseppe Verdi's cravat, cars, TV sets, tractors, jewelry, transistors, wooden statues from the Renaissance, panoramic views of the fairytale landscapes, electronic computers, boomerangs, an Ethiopian lion, an Australian kangaroo, Donatello's *David*, a photo of Marilyn Monroe, a mirror-labyrinth, a few hundred prefabricated dwellings, a plastic human brain, three parachutes, ten carousels [...]. (Eco 1987: 291–292)

In this wandering fairyland of objects, how does the impressionistic (or anecdotal) evidence of the collection alert the art viewers to enjoy what is art separated from "art" (or even "pseudo" art)?

If we pursue the articles in *Iconicity* (Bouissac *et al.* 1986), the *Festschrift* for Thomas A. Sebeok, his efforts would exemplify the historical growth and development of the "prefigurements of art" (Sebeok 1981). Sebeok (1981: 211) analyzed the genesis of art growing from the expression of the "love of decoration", displayed by certain animals. Despite Tinbergen's statement that human and animal behavior do not have a common language, we can still compare visual landmarks of human behavior in a mixture of anthropological terms (Tinbergen 1975: 61–174). In Sebeok's view, the examples of kinesthetic, musical, pictorial, and architectural signs show clearly what the dance behavior by bird songs, finger paintings by chimpanzees, nest making by beavers, and other activities engaged in by animals, can mean (Sebeok 1981: 216–249). The theoretical remarks are exemplified in an analysis of selected passages of animal "art", in which Sebeok shows the abductive Firstness in the anthropomorphizing fine arts of animals. Seeing a compilation of human traces of Firstness, we may catch a first glimpse of the workmanship that at a

later date would mythologize fragments of the poetic atmospherics of Firstness in human arts — and see how invisible Firstness is unfolded in the inductive reality of visible Secondness.

The reasons of art (or "art") objects can have a historical origin, from animal to man, but may also have a biological foundation running from Peirce's "undegenerate" signs to "degenerate" signs. In Peirce's logical and mathematical view, the symbol is the only genuine sign, and the index and icon are degenerate signs. Yet the compounding of the three categories in some signs reveals both genuine signs and less complete (or deteriorated or impure) signs, that is Peirce's term of degeneracy (discussed in Gorlée 1990). Degeneracy is evolved in Peirce's writings from 1885 to 1907 (see Gorlée 1990: 89–90). After 1904, degeneracy became involved in his later theory of varieties of sign, in which degeneracy is mentioned and integrated in an evolved sense (MS 339C: 498). Peirce wrote in 1909,

> There are two kinds of second, the external or normal, and the internal or degenerate. For example, all relation[s] implies a second, but identity is a kind of relation which makes a thing second to itself. [...] We speak of motives or allurements as forces, as if I were under compulsion from within. So with duty, and the voice of consciousness. An echo is my own voice coming back to answer itself. All likeness is mere internal secondness, — an identity in the characters of the resembling things. [...] By the Third, I understand the medium which has its being or peculiarity in connecting the more absolute first and last. The end is second, the means third. A fork in the road is third, for [*sentence incomplete*] In place of the words, first, second, third, I might almost as well have used, "beginning, end, and middle", — the word middle corresponding to third not to second. (MS 906: 3–4)

Both Thirds and Seconds can have themselves degenerate forms. In a degenerate Second, the Secondness partakes of Firstness and is called degeneracy to a first degree; in a degenerate Third, the Thirdness partakes of Secondness and Firstness and is called degeneracy to a second degree (Gorlée 1990). However, Firstness may have some pre-Firstness which is what Peirce named, only once in his *Collected*

Papers, as the unspecific and undetermined spirit of undegeneracy (CP: 1.383).

The undegenerate and natural pre-form of Firstness forges its *mélange* with Secondness (and Thirdness) to become a cultural artifact. Peirce wrote that

> The work of the poet or novelist is not so utterly different from that of the scientific man. The artist introduces a fiction; but it is not an arbitrary one; it exhibits affinities to which the mind accords a certain approval in pronouncing them beautiful, which if it is not exactly the same as saying that the synthesis is true, is something of the same general kind. The geometer draws a diagram, which if not exactly a fiction, is at least a creation, and by means of observation of that diagram he is able to synthesize and show relations between elements which before seemed to have no necessary connection. The realities compel us to put some things into very close relation and others less so, in a highly complicated, and in the [to?] sense itself unintelligible manner; but it is the genius of the mind, that takes up all these hints of sense, adds immensely to them, makes them precise, and shows them in intelligible form in the intuitions of space and time. Intuition is the regarding of the abstract in a concrete form, by the realistic hypostatization of relations; that is the one sole method of valuable thought. (CP: 1.383)

The intuitive abilities of primitive man make iconic (image-like) traces of Firstness into weapons, tools, or even works of art, confronting not only the immediate environment but eventually with time facing the world at large. Ginzburg observed that

> Man has been a hunter for thousands of years. In the course of countless chases he learned to reconstruct the shapes and movements of this invisible prey from tracks on the ground, broken branches, excrements, tufts of hair, entangled feathers, stagnating odors. He learned to sniff out, record, interpret, and classify such infinitisemal operations with lightning speed, in the depth of a forest or in a prairie with its hidden dangers (Ginzburg 1990: 102, see Ginzburg 1983: 88 and Ginzburg 1979)

Historically, the "animal" responses of the identification methods of human individuals are "readable" — that means, in Firstness, imaginable — skills used in archaic and modern hunting, shooting, and fishing activities as well as used in modern forensic techniques. These strategies, bounded by the necessities of survival versus death, create the undegeneracy of a physical translation from pre-social and pre-cultural signs of pre-Firstness to the social and cultural signs of Firstness.

Recently I visited the city of Tartu. There is a cultic stone kept for memory, known as the sacrificial stone (Salupere 2006: 98–100, 64–65 ill.) with identificative marks to shed human and animal blood within the holes and curves of the stone. According to Frazer's classic *The Golden Bough*, the sacred stone with the pagan icons was "simply a precaution against witchcraft" (Frazer 1963: 273–274, see 38). Further Frazer (1963: 50) commented the magical sense of the person's "impressions left by his body in sand or earth". Indeed, the shapes of foot tracks, fingerprints, bloodstains, followed by the seals with pictured impressions and the X rays, ID photographs, name stamps, initials, autographs, and signatures — see today's public and personal email addresses and websites — are magic signs. "Automatically" (Dewey 1934: 227) created as undegenerate traces of selfhood, their shapes are real and their form perceived in Secondness, but these bodily signs are a fugitive hint of Firstness (*Black's Law Dictionary* 1999: pp. 129–130 "automatic/ism", p. 648 "fingerprint", p. 656 "footprint", p. 982 "mark", p. 1146 "passport", p. 1387 "signature", p. 1412 "stamp"). Expressing everyday practical objects or parts of the human body, these undegenerate signs are by most of us *believed* to be physical and personal imprints. The copy imitates a visible image enabling us to communicate a de-formalized or subjective "idea" of the formalized indication of the individual person. This "idea" is no more than an improvization (Firstness), secretly keeping a name secret, but it must be stressed that there is no scientific means of deciding the control of the visual or digital human identity (no Secondness) of the person. The pre-ontological experience of the material traces of

selfhood is no more than an illusory promise, but is officially considered a formal, even "legal" copy.

The marks, stamps, and traces are regarded in fairytales and legends "sympathetic magic, where any person has to be careful in disposing of finger-nails, excreta, hair, and the like — since each item of the *disjecta membra* retains a significant trace of the identity that gives to the sorcerer holding the part a measure of control over the whole" (Shands 1977: 20). Following Sebeok's semiotic analysis of the magic of Cheremis "charms" (Sebeok 1974: 14–36, originally published in 1953), the idea of *disjecta membra* appears in beautiful charms, attractive to the receivers. Sebeok gave to the cultivated charm a mythical content of prayer for health, love, and weather conditions. The "historiola" (Sebeok 1974: 24–26) of the pre-Firstness of magical charms are basically undegenerate sign-events, taken without genuine psychic awareness from natural history to intimate identity, as it is or seems to be, without legal evidence and without the artistic playfulness of art. They may be helpful for group identity for anthropologists or archeologists, but singularly unhelpful for the legal identification of the authenticity and legal certification of a specific natural person (*Black's Law Dictionary* 1999: 127-129 "authority", 220 "certification") — who knows what is what? Semiotically, the genuine First (of First) of the physical nature is thus rooted in "ignorant" functions — that means, unconscious and unauthorized bodily signs — taken from living individuals to serve as some legal proof to the community. Foot- and handprints as well as other identification marks constitute an imperfect record of selfhood, since the sketchy meaning of the zero signhood represents almost Peircean "airy-nothingness" (CP: 6.455).

Used by the police as an evidence of personal well-being or public security in the atmosphere of terrorism today, the functional traces or marks of a person can be scanned by electronic capture, recorded, and accounted for real authentication or certification (versus minor or major variations in copies and clones). The abductive nature of these confessional acts lays bare a central feature: they measure some visual and imaginable clarity of the real identity of the individual, but they emphatically provide nothing as a clear narrative clarity, in the sense

of legal evidence of the person involved. The dangers of the testimonial techniques of undegenerate signs are improvized traces and no more, and must thus constantly be violated by new and more advanced methods to resist a total identification outside the given immediate environment of the "animal" world, to handle a fixed context facing the verbal and nonverbal human communication of both the literate and illiterate world spheres. As borderline cases of public and private signs, consider the "decorative" imagery of rune inscriptions, the Mesopotamian tablets, Chinese or Japanese pictographs for "ignorant" Western *amateurs*, or written texts (in any language) that do not "look like" script but as pictorial images to a child or adult illiterate.

Undegenerate signs can grow into degenerate signs, and degenerate signs may eventually develop into art. In his article "Tribal styles", the art historian Gombrich retraced the mechanical analogy of the knitting pattern which offers instruction for a sequence of stitches for carpetlike designs (Gombrich 1987: 26–27) — as today in Navajo carpets and Oriental kilim rugs. Weaving is one of the oldest arts, and serves as a historical example of art, but we see that the term "decorative" loses its specific meaning for the symbolism of tribal art. The technique for pattern-weaving is not personal and playful but stays strictly programmed, according to the spiritual mythology of the shapes, images, and colors used in the religious nature of the group. This traditional craft and technique, even with slight innovations, cannot yet be considered the art of an individual weaver. Gombrich wrote that this point was made long ago by Franz Boas, the founding father of modern anthropology, who made clear in his classic work, *Primitive Man* (1st ed. 1927) that

> When the purely decorative tendency prevails we have essentially geometrical, highly conventionalized forms, when the idea of representation prevails, we have, on the contrary, more realistic forms. In every case, however, the formal element that characterizes the style, is older than the particular type of representation. This does not signify that early representations do not occur, it means that the method of

> representation was always controlled by formal elements of distinctive origin. (Boas 1951: 354)

Long before Boas, Peirce discussed in 1907 the semiotic workings of the Jacquard loom, the first machine to weave in patterns, exhibited in Paris at the Industrial Revolution (1801). He wrote that the Jacquard loom produced, as he called them, primitive icons — that is, "quasi-signs" with a qualitative likeness to the object (CP: 1.473). Peirce's statement of pre-Firstness — "quasi-signs" — illustrated the possibility of the development from this "purely brute and dyadic way [with] automatic regulation" to a tertiary design of a textile weaver. Peirce clarified that "it will be convenient to give a mere glance" (CP: 5.473) to produce the first interpretant. The abductive "mere glance" of the textile or the carpet implies dramatic variations of meaning-giving interpretants to appear as novelty to the outside world.

Cultures have dominant technologies in order to shape their own technomorphic designs, yet "real" art disrupts the seers in delightful ways of Firstness, and stands for new and abductive art. Breaking out of purely functional or totemic emblems for the ethnic group (Singer 1984: 105–154; Lévi-Strauss 1963), artistic selfhood opens up with the ethnocultural Firstness of the undetermined and undecided motifs representing events and thought-signs of children's drawings, early cave paintings, Egyptian hieroglyphs, tattoos, Oriental ideographs, voodoo dolls, American cryptographs, and in comics and folk-tales. The familial feeling of a *doubly* degenerate sign — First of Second — spreads to the austere naturalism of "primitive" art styles towards singly degenerate signs — real Second — made by the mastery of a particular artist. The style disrupts in a "potential mood" but stays inside the fixed "imperative, or indicative" tradition, showing the artist's cry, "'See there!' or 'Look out!'" (CP: 2.291), familiar to Munch's later cry. In the degeneracy of the work of art, logicalism remains out of focus and tribal and subjective emotionalism is brought into sharp focus. The image of the group instinct and religious feeling is transposed from folklore into subjective painting, music, and other art forms, and gives in art-making "a kind of self-enjoyment, though

involving an inner detachment or psychological distancing of the self from itself" (Aldrich 1963: 13). The distance from reality will direct the artworks to the struggle of Secondness with and against reality. Gombrich called ethnocultural art "zebra crossings" that occur in the "living fossils" (Gombrich 1987: 23, 26) of evolutionist art today.

A few examples of the growth of the emergent status of art until well into the twentieth century will celebrate how doubly degenerate art can grow into the individual styles of singly degenerate art. The musical "vocabulary" of the Brazilian composer, Heitor Villa-Lobos (1887–1959) imitates the exotic sounds of Brazil's Indians, including the carnivalesque dances and songs, bringing them into Western modernity (ex. Villa-Lobos 1996; Tarasti 1995: 126–127). Villa-Lobos' cantata *Mandú-Çárárá* that builds on "syllables of a ficticious Indian language, *jakatá kamarajá*", spreading from the tenors to the mixed chorus, whereas "the male voices' stifled, onomatopoetic *Hum Tum*! [stays] reminiscent of an Indian dance" (Tarasti 1995: 128–130, 370–372). In Villa-Lobos' *A Floresta do Amazonas* (*Dawn in a Tropical Forest*; ex. Villa-Lobos 1991), the listeners are introduced to a musical "copy" of the sounds of the Indian jungle and the fauna of the Amazonas. Villa-Lobos turned the indigenous Firstness of natural birds and animals into elements of his modern fantastical insight — building his musical Secondness.

The eminent Peirce scholar Merrell (1995: 158) transfers doubly and singly degenerate signs to "contemporary painting, and its counterparts in our high-tech, fast-track world of mass media (television, videos, movies)" as we see — inspired by the American pop-art's graffiti, animation, etc. — the sketchy human figures drawn by Keith Haring (1958-1990) on his path back to a ritualistic way of being in the world. Modern art can be adorned with a patriarchal and patriotic, or even sentimental stage of nostalgia. This new harmony is perhaps based on Paul Klee's (1879–1940) formal and imaginative human icons — small visual elements with line, color, and shapes of Surrealist and Dadaist origin — out of which the painter builds the total order and the mystified balance of his "multi-dimensional" and "polyphonic" pictures (Ehrenzweig 1967: 25). Consider the example of

the Swiss-Italian sculptor Alberto Giacometti's (1901–1966) narrow, long, and thin upright figures from the years 1950–1960. His almost one-dimensional human silhouettes are transformed into sinister and meager caricatures of figures (Ehrenzweig 1967: 17, 144). Giacometti's sculptural likeness was directed against traditionalism and naturalism, but his modern prototypes of individual persons are clearly reminiscent of the Firstness of African art. His "primitive" Firstness of the bodily lines has the fugitive and even fleeting meaning of Peirce's "airy-nothingness" (CP: 6.455).

Another example of the modern use of the ethnocultural icons is the Italian sculptor and painter Mimmo Paladino's (b. 1948) mixography of human figures, pointing way back to a fairytale past (Paladino 1985). Building a bridge between two worlds, Paladino's bronze and iron sculptures, drawings, woodcuts, and linos present a charming and witty synthesis of a modern artist to the "art" of some other historical civilization. In Paladino's sculptural "poems" (or metapoems), icons are vaguely interconnected and deconstructed to the figures, in such a way that the complex of the artwork makes the primary Firstness of the "tribal" art of the mythical characters. The icons are found in "vulvar, phallic, cruciform, sticklike, egg-like ideograms, cup marks, cup and ring marks, hand prints, foot prints, and animal tracks" (Anati 1994: 138). The iconic superimpositions on human figures make "modern" signs beside or beyond the rudimentary historical indications (sub-signs) of some previous art. It makes the viewers more conscious of Paladino's modern expression and (probably his) entertainment, transforming disparate materials into new art, creating some mysterious place with an indeterminate or possible meaning, similar to ideograms or hieroglyphs (Kuspit 1985: 18).

6. Archaic iconography and beyond

The modern shapes and forms of iconicity of Haring, Klee, Giacometti, and Paladino seem to be "synonymous" with the historical "art or

script" (Bouissac 1994) of the rock paintings in pre-civilized days. Rock art was painted by the first artists in the Paleolithic era of c. 6,000–14,000 years ago (and some considerably further back). Spiralled back in time to witness the archeological or quasi-archeological nature of art, the ancient discoveries of ethno-graffiti are today considered not only in the anthropological and historical but also in the psychological and religious sense. As Carl Gustav Jung (1875–1961) wrote:

> From the very beginning of human society we find traces of man's efforts to banish his dark forebodings by expressing them in a magical or propitiatory form. Even in the Rhodesian rockdrawing of the Stone Age there appears, side by side with amazingly likelife pictures of animals, an abstract pattern — a double cross contained in a circle. This design has turned up in practically every culture, and we find it today not only in Christian churches but in Tibetan monasteries as well. It is the so-called sun-wheel, and since it dates from a time when the wheel had not yet been invented, it cannot have had its origin in any expression of the external world. It is rather a symbol for some inner experience, and as a representation of this it is probably just as life-like as the famous rhinoceros with tick-birds on its back. (Jung 1975: 96).

The mythology of the Paleolithic rock art — "abstract art" painted on the rocky surface of the walls and ceilings in the remote caves, rock shelters, and cliffs, inhabited by Stone Age proto-people — contains both undegenerate and degenerate signs. In many areas, art — painting as well as music and dance — seemed to take up more time than any other activity, devoted to basic needs for food production together with the procreative and sexual functions (Boas 1951: 299ff.). Art was no hobby but seemed to be a specific talent of *Homo sapiens.* The rock paintings express stylized images of species such as rhinoceros, mammoth, horse, bison, bear, ibex, and reindeer. Beyond the artistic copies of the movement of animals, there exist the unindividualized "stick figures" of man (or woman) (Gombrich 1996: 12; see Gregory 1987: 45–46; Herminione 1996) together with copies of human handprints and other icons painted on the rock (McNeill 2006: 21–22). In the pattern of artistic expression that emerges from a

lengthy pre-cultural period, the "copied" imprints suggest the evolutionary Firstness of the untamed (undegenerate) and measured (degenerate) signs, contributing at a later date to personal art-signs (Ehrenzweig 1967: 139, 173; Gailli 1996: 29, 41 ill.).

The caves show authentic relics produced over some 40,000 years, but they still remain *in situ* to be researched as cultural heritage. Most caves (Altamira, Lascaux, and others) have depictions inside, preserving abstract images of bits of charcoal or red-ochre as vivid sketches reproduced in the darkness of the rock caverns; but those in the Portuguese Cõa Valley are hardly visible designs in open air rock surfaces. Over time, the serigraphic sights of scenes and events are bound to lose their tone, shape, and color, through erosion, rainfall, storm, snow, and ice falling on the rock. The vision of the future visitors and scholars of palaeoart must conjure something from nothing, or almost nothing — an inconclusive evidence indulging in "subjective hunches" (Gombrich 1996: 10) to give a meaning to the imaginary images and ambiguous fragments. Sebeok would guess the meaning of

> [...[stick-figures, cartoons, sketches, paintings, photographs, and a host of other possibilities for pictorial representation, with varying degrees of accuracy [where] the perception of all depictions, moreover, varies across species, cultures, and times. For example in the crowd scene [...] are the people fighting, dancing, or engaged in some other activity? (Sebeok 1984: 17; see Bouissac 1994: 355)

Recapulating in the pseudoart the characteristic silhouettes of archaic animals, hunters, breeders (and later farmers) (Anati 1994: 131–134), tribal or group art (called anthropological art) is then and now considered as the first "childhood of mankind" (Gombrich 1996: 8). The drawings have a twisted perspective on the flatness of the painted surface: the animal is drawn in profile and the body in full face. Coincidentally, this twisted perspective was followed from pseudoart to modern art — taken up by Picasso's "objects" who observed the "semiotic twist" of the earlier examples of Iberian (and other) sculptures and reliefs in his collages and assemblages (Quinn 1995). In

terms of giving the work of art a mystery, rock art goes back to where we started, in the *undegenerate* fossil record with a *degenerate* sacred meaning (Highwater 1994; Jung 1975; Gorlée 1990). The starting development of the human race seems to include artistic portrayals of magic rituals — are the caves sanctuaries? — and social scenes — such as dancing or warfare, or hunting, fishing, and angling — performed together as clan totems (McNeill 2006: 20; Lévi-Strauss 1963).

The purely deictic function of rock art is the form of expressing group art, whereas the emergence of personal artistry is primarily expressed in the next phase, starting with child art (Ehrenzweig 1967: 3–20, 290). The abstract or "primitive" drawings with the reverse perspective occur "in the transition between symbolic play and imagination" (Krampen 1986: 148) in the footsteps of Jean Piaget's (1896–1980) mixed Saussurean-Peircean definitions of the drawing and its psychological background. The following age phases appear in the children's free drawings:

> — [rhythmic] scribbles pertain to the phase of sensorimotor intelligence (age 2–3)
> — fortuitous and failed realism (= synthetic incapacity) are connected to the preoperational stage of concrete mental operations (age 3-5)
> — intellectual realism is connected with the transition from the pre-operational stage to that of concrete mental operations (age 5-8)
> — visual realism presupposes concrete mental operations (age 8-12) (Krampen 1986: 150)

The infancy of drawing seems to overlook "a crucial difference between child development and hominid evolution — namely, that the former is dependent on adults for its survival, while the latter had to be highly successful survivors at every single stage of their evolution" (Bouissac 1994: 363). Naturalistic (that is "primitive") psychology is really the stylized effort of play and imagination to extend the historical course from doubly to singly degenerate signs. In tribal art, the copying of geometrical figures into something else, a more personal expression, would clash with the artistic icons of Firstness. In the evolutionary sense, the artist starts from a romantic-expressive

image (Firstness) to reach the trivial-didactic "mythology" of developmental art (Secondness), which must be learnt to be understood.

Archeological art is a catalogue of "uprooted" objects coming today in fragmentary states. Partly broken, with some pieces missing, and the surface worn, they need reconstruction to see the whole form — interpreted from Firstness upgraded to Secondness and even to pseudo-Thirdness. The free-standing figure of the Greek (Hellenistic) masterpiece of the *Venus of Milo* (dated to around 2nd Century B.C., in the Louvre, Paris) is, despite her height of 1.8 m., a fragmentary symbol (Boardman 1994: 192, 193 ill.). Found in the Aegean island of Melos in 1820, she lacks both arms, but the female beauty of the body, the fluidity of the lines and the contrast between the folds of the draperies and the nudity of the torso transformed her into the statue of female beauty for all times (Curtis 2003). Venus is portrayed in classic style following the features and conventions of nude studies. Despite the old pose, in the present variant of the sculpture Venus' head is based on a twisting movement, and her body turns in different directions in such a way that the statue looks like a moving sculpture.

As the *Venus of Milo*, most classical statues have long lost their head, eyes, noses, arms, or legs, see *The Winged Victory of Samothrace* (c. 190 B.C., in Louvre, Paris). The colossal figure of an arched body in marble (height 2.4 m.) is poised upright with spread wings, and seems to be resisting the wind, which is flattening the soft folds of fabric against the body (Dewey 1934: 234). *The Winged Victory*, a symbol of military success, was erected to commemorate a victory of the fleet of Rhodes at Samothrace (Boardman 1994: 190, 191 ill.). As Dewey observed, the definition of the style is not clear-cut, particularly the expression of the drapery in bronze-casting, which expresses the artist's mood in the play of folds forcing the spectator to move around the statue in a twisting pose. Since the 1950s discovery of the figure's right arm, it is thought that the right arm was stretched high to announce the victory. Together with Venus' arms, there is in both statues a "possibility" of meaning of the energy pushing the movement forward from classical features to the masterdom of new artistry (Boardman 1994: 191, 193 ill.).

Venus and *Samothrace* start an epic memory of artistic selfhood for the sculptor and the spectator. The artist stayed inside the despotic tradition of cultural perspective and convention — that means double degeneracy developing towards single degeneracy with authentic surprises of "specialized" artistry that did not follow the sculptor's model. Peirce wrote that "I have my doubts whether Greek sculptors of that age used models as ours do. I think the canon and their memory guided them mainly" (SS: 194). Yet Peirce added to the general "type" a personal "'token'", on the contrary, — literally, = French *coup*" (SS: 194), in English the effort of an creative knock or kick. The abductive impression of the sculptures is no "melodic" tradition, according to the current fashions, but reflects the personal vision of the "reality" of the artist him/ herself. The statues' graceful and explosive movement reflects the artist's abductive art — Firstness moving until Secondness of art.

As an excursus, the tourist attraction of ancient Pompeii, the archeological city on the Bay of Naples that was destroyed by the eruption of Mount Vesuvius in 79 A.D. Pompeii is today a touristic setting that, however, is decaying and, in part, left in ruins, with fallen stones and frescoes with faded or disfigured surfaces. The discolored fragmentariness happens through time, the radiance of sun, and falling rain drops is similar to rock art. Significantly, Pompeii also lacks manpower to undertake the project of the cultural heritage. Not considered "art" but speculatingly "art for science's sake" are the displayed excavated bodies of the Roman citizens. The "pseudo-event" (MacCannell 1976: 103f.) of offering the display of real bodies, exhibited in glass boxes, serves as a living *cabinet des curiosités* for the visitors of the Pompeii "museum". The nude twisted bodies contorted into anguished poses are transformed into exotic museum pieces showing to the visitors undegenerate signs with a "possible" meaning. The physical bodies are thus turned into virtual degenerate art, similar to the imagery of the frescoes, mosaics, and statues, deflecting the military, artifactual, and leisure activities of life of the Roman holiday resort.

The discoveries of Pompeii have been excavated under cinders and ashes, and become archeological findings in the modernized museum, where undegeneracy is linked with degeneracy. In the Pompeii museum or gallery, both physical and real signs are located as art in the showcases to amuse and entertain the more than two million visitors each year. This quasi-official status of art with "art" exhibits, as a subject of the Pompeii controversy, all kinds of objects to be "consumed" in their educative, ethical, and aesthetic roles (D'Ambra 1998) — despite the real historical fact of the actual volcano eruption, a catastrophe surprising everyone in the daily life of Pompeii. Art and "art" (including "pseudo-art") in Pompeii is no outward form of specific art of shapen and misshapen bodies and faces, recognized by marks of undegeneracy and degeneracy. Pompeiian life everywhere on the streets can only be understood through knowledge of what happened in the life and times of the Roman Empire (Beard 2008), that is outside primary Firstness.

If we return from archeological fragments and other portions of Secondness back to the undirected pre-forms of Firstness, we see that flashes of pure Firstness in other arts represent the *nothingness* involved in the sign(s) and/or the object(s) within the "possible" interpretants. Some practical examples of the mindless, wordless and imageless belief of the *nirvana* (a First directing to Third) in the art-sign would compose and arrange the viewers' fantasies (Firstness) into reflections (Secondness), making the strange obvious and eloquent. Since Firstness is a non-sign, the examples are already signs of Secondness and perhaps some Thirdness is integrated to reflect an interpretive meaning not of a fragment or details but of a whole piece.

Richard Wagner's (1813–1883) opera *Das Rheingold* (discussed in Gorlée 1996: 422–426; 1997: 252–264) — written between 1853 and 1876 to be performed as *Vorabend* of the whole *Ring des Nibelungen* cycle — begins with an introduction (*Vorspiel)* transpiring at the dark bottom of the Rhine. The introduction is played during 4'36 minutes by the "underwater" orchestra without any stage performance. The watermusic is built upon one point, the third tone E flat. From this leading *Ur*-note (Firstness) three motifs gradually seem to grow from

nothing to a continuous *crescendo* played by different instruments — from strings to brass, woodwind, etc. — to provide a musical framework (Secondness). The murmuring *arpeggio* motif is shifted by a broken chord growing into a wavy musical pattern (Apel 1946: 52–54 "arpeggio"; 103 "broken chord"). Indeed, from nothingness to richness, the object of Wagner's *Vorspiel* eventually breaks the chords up and down, extends the tempo, and interpolates foreign notes. The objectual complexities of Wagner's prelude come from within and are left unknown (or "anonymous") to the listeners, yet by being outwardly repeated and developed — Wagnerian *leitmotif* — they will at liberty open up in possible interpretants of the opera itself (Ehrenzweig 1967: 54, 91f.). The wave motif, lifting upwards through the dark shades of the turbulent Rhine water, symbolizes the brightness of light. Wagner's *Valhalla* music suggests a First indication of something deep in shadow — from an "oceanic" level (Ehrenzweig 1967: 120, 192, 294f.) the sunken treasure is raised from the deep bottom of the river. This revelation explains the further search in Wagner's tetralogy — after *Das Rheingold,* we have the three remaining operas, *Die Walküre, Siegfried,* and *Götterdämmerung* — to find the hidden treasures of gold, love, and success (Tarasti 1979: 78).

Wagner's *arpeggio* motif was echoed by Camille Saint-Saëns (1835–1921) in his Third Symphony in C minor, also called the "Organ" Symphony (1886) scored for vast orchestra, but with a flair of bringing a dramatic variety of orchestral color, also played by a piano and an organ (ex. Saint-Saëns 2001). This Third Symphony was composed by this musical craftsman at the highpoint of his brilliant career, and is now almost forgotten. Saint-Saëns was not only a French Wagnerian but had a "flair for assimilating everything assimilable in Berlioz, Liszt and Gounod" (Abraham 1964: 180). The theme-transformation was not only shown in Saint-Saëns' charming *Carnaval des animaux: fantaisie zoologique* (1866) and the seductive music of the popular opera, *Samson and Delila* (1877). From 1858, Saint-Saëns was, aged just twenty-three, the organist of the voluminous organ at *La Madeleine* in Paris. He varied the orchestral symphony with his love for organ music and Gregorian chants. The

Third Symphony was a heterogeneous "motto-theme" (Abraham 1964: 172) sporting all of Saint-Saëns' technical skills in a kind of "rhapsody". The Symphony had four different movements: the first movement, a slow introduction of *Adagio — Allegro Moderato* "imitates" Wagner's *Vorspiel* to *Das Rheingold*, leading further to a lyrical theme. In the second movement, *Poco Adagio*, the organ starts with the musing undertones of the lowest register, almost the inaudible sounds of the chapel bells. The overtones of the organ come in the concluding *Maestoso — Allegro* movement. Yet Saint-Saëns' romantic and lyrical melodies are considered as superficial and cool harmonies, missing the dark pathos of Wagner's tragedies.

The musical examples have shown the high and low tone-sounds reflecting pure and polyphonic tones of the melody, the slow and quick tempo, the flat and sharp pitch and loudness and softness of tonal timbres, the spoken and sung rhythm, together with the chromatic harmony of consonant and dissonant chords (Apel 1946: 753 "tone", 497 "note", 736 "tempo", 584 "pitch", 747–748 "timbre", 639–642 "rhythm", 322–325 "harmony"). They intermix in the function of musical Firstness, its transition into Secondness and pseudo-Thirdness. Peirce wrote in his *Logic Notebook* (1865–1909), on a handwritten memo dated from July 8, 1906, that "A *Tone* as that whose accidental being makes it a sign. A *Token* or that whose accidents of existence make it a sign. A *Type* or that thought upon which makes it a sign" (MS 339C: 499). To make the distinction in music, this triad pertains to the voice or instrument, the written signs, and the notational systems: a tone embodies material properties, a token signifies the condition of the musical action, a type is a significant rule affecting musical notation (CP: 4.537; see Freadman 1993: 88ff.). The pictorially symbolic and graphic system of arbitrary signs translated into performance indicates pitch, duration, and song (or score). In musical genres, the triad tone, token and type affect together the categorical elements of expression, tempo and nuance with rhythms, harmony, and tune.

Taking the sounds of the chapel bells and the monophonic (unisonous) Gregorian chant as a base, the written and sung syllable and

accent is musicalized in the later medieval and Renaissance anthems of Orlando Gibbons' (1583–1625) polyphonic music in the English tradition. Gibbons was the English composer and organist of the Chapel Royal and the Westminster Abbey of the Tudor period, around the same time as the liturgical reform of church music in the hands of Martin Luther (1438–1546) in Germany (Gorlée 2005: 26, 66–76), both are hallmarks of the new chants of the church, stigmatizing the Catholic tradition and moving into revival movements leading to the modern consciousness of Humanism and Reformation. Gibbons' organ intermixes with the lyrical types of the English high voices in his vocal church music. In *Praise the Lord, I My Soul, Lord, We Beseech Thee*, and the anthems (ex. Gibbons 1983–1984), the polyphonic settings of the hymns and the psalm tones are attuned to the old-style "treble" and "mean" boys' voices or, an octave lower, the man's countertenor. This vocal *mélange* (solo or accompanied with organ) mastered the absolute counterpoint of the choirmaster's art — preparing the way for the musical declamation of the oratorios of Henry Purcell (1659–1695). The fragments of Gibbons' original designs, as they have survived today from the second half of the sixteenth- and seventeenth-century, bury in the performances the vocal and musical instruments together in one single lyric tone color and artistic harmony of pure Firstness. Beyond the elastic limits of the melodic Firstness, the holy words "tell" the narrated faith in Thirdness, brought together in Secondness. Anthems are a "wilderness" of vague words with fuzzy edges, but this problematic fact makes faith and reason come together.

In modern days, the natural sound of the Brazilian jungle sounds are fictionalized in Villa-Lobos' folk-like musical style, the mythology of the chapel bells has echoed in the unconfined spiritual Firstness of Pärt's "tintinnabuli" style, together with the other examples. The unreal, non-sign simplicity of Firstness can be given a space in a meaningful Secondness and Thirdness. In terms of the possibility of a meaning, the leaning toward "nothingness" of artistic Firstness was fully exploited by Wagner's "stationary spread of sound, albeit animated by interior motion" (Dahlhaus 1985: 107). He introduced in

his operas the antithesis of the "popular" or "childlike" with "classical" and "refined" elements (Schwab 1965: 131; Gorlée 2008a: 118). Wagner's narratives of self-sacrifice, redemption, and revelation, clothed in his sentimental tunes, would grow into the popular(ized) music performed in the music hall, operetta, ballet, and the musical. Wagner's dynamic movement between nature and culture, between intuition and knowledge, and between banality and mythology, deeply determined the vigor of primary Firstness in post-Wagnerian music and other arts.

7. Other flashes of Firstness

During the second half of the nineteenth- and twentieth-century notions of art, other modern composers, painters and film-makers repeated in orchestral music, painting, and film the minimalist technique of using examples of artworks, reconciling and upgrading the idea of Firstness.

Jean Sibelius (1865–1957) — after his versions and revisions of the *Fifth Symphony* (Op. 82, 1915–1919) — inaugurated a release bordering on a "functional economy" (Whittall 1988: 10–11). In Peirce's semiotics, this is a "silence" form of Firstness, a foreboding of something new. The changing "emotional map" (Whittall 1988: 12) turned the innovative Finnish composer into an experimental stage, moving from "absolute" symphonies to a new mixed genre: symphonic tone-poems. Sibelius introduced the magical mood of Firstness in his tonal music, such as *En Saga* (1892, rev. 1902), *Voces intimae* (Op. 56, 1909), *The Bard* (Op. 64, 1913, rev. 1914), *The Oceanides* (Op. 73, 1914), *Prelude to a Tempest* (Op. 109, 1925), and *Tapiola* (Op. 112, 1926) (ex. Sibelius 1991, 1998a, 1998b; Whittall 1988 18–24).

Wagner's prelude to *Das Rheingold* and the storm in *Die Walküre* inspired Sibelius' *Tonmalerei* (Dahlhaus 1985: 101–102, 106, 121). In the tone-poems, the natural world, inspired by the nationalist and nostalgic depiction of the epic *Kalevala*, leads to an "oceanic" feeling of magic (Ehrenzweig 1967: 294f.). Sibelius' musical miniatures

introduce Peircean icons of the timeless forces of nature in the dark Northern winter in "a single frozen moment: a painting" (Whittall 1988: 24) transposed into music. The mysteries of the Finnish forests, the cries of the swans and cranes, and other natural wonders have lost the controlled consciousness of sign and object, and are for the listeners transformed into a vague vision seen "through a glass, darkly" (1 Cor. 13: 12). The musical icon is "not the [very] thing [and] the distinction of the real and the copy disappears, and [the musical painting] is for the moment a pure dream" (CP: 3.362).

Tone poems are programmatic music, their "likeness" sets Sibelius' Firstness to musical "reality". *The Bard* is a short tone poem, musically picturing Johan Ludwig Runeberg's (1904–1977) poem of a "primitive" musician that after a life-work returns home to die. *The Bard* shows the simple chords of a solitary harp as the only solo instrument (Firstness). The symphonic poems, *The Oceanides*, derived from the nymphs of the ocean of *Kalevala* and based on Homeric mythology, and *Prelude to a Tempest*, are derived from Shakespeare's (1564–1616) *The Tempest*. The musical poems are incidental pieces with the main program of "graphically" depicting the natural "monotony" of the ocean waves and the wild storm (Firstness) in musical signs. *Tapiola*, the twenty-minute orchestral composition completed in 1926, is Sibelius' last major work. The final work is about Tapio, the forest god of Finnish mythology. *Tapiola* is a nature-inspired combination of the "fragments" of the programmatic tone-poem and Sibelius' "whole" seven symphonies. Based on one short home chord of B minor (Firstness) that is repeated throughout the work, the whole-tone harmony of the tone poem depicts the physical or mental storm in the Finnish forests. *Tapiola* represents the "infinite varieties of life in the forest, all of which spring from a common source" (Johnson 1959: 168). Peirce's Firstness represents the Creation of Firstness.

Firstness is transmuted into Secondness through the intensified concentration on the growth of different aspects of the single idea of Firstness. Within the string quartet of *Voces intimae* (*Inner Voices*; ex. Sibelius 1998b), the instrumental monolog between first violin and cello in the opening measures undergoes the musical evolution of

making degenerate signs. The strange sounds grow into a polyphonic and chromatic dialogue of tragic despair, "creating something out of nothing" (Johnson 1959: 167). This double procedure is also criticized in *En Saga*, musically derived from the Nordic Edda runes (Tawaststjerna 1968: 192; see Tarasti 1979: 102). To musically depict the "vague title" (Johnson 1959: 60) of the song, *En Saga* presents a monotonous dialog of bassoon and bass, giving a rhythmical "whir of pizzicatos and arpeggios" to make together an "archaic clumsiness of the main theme itself" (Tarasti 1979: 103, see Tawaststjerna 1968: 193–198).

Sibelius' nationalist drama is nicely illustrated by his own archeological experience in the year 1911. When Sibelius was walking in the shore of Lake Vittråsk, he happened to find a series of barely visible visual carvings on the edge of the steep rock cliffs, dating from 1500-500 B.C. (Kartunen 1995), a period from which no written documents have survived there. Sibelius performed a solitary quest of climbing over rocks and seeing the primitive images of, as we guess, an elk figure and a fishing net — an epic discovery of Finland's first primitive artform. His discovery of rock carvings in danger of being lost must have determined his self-critical gaze and influenced his interdisciplinary "forging" (as he himself put it) (Kilpeläinen 1995: 18, 22) of the separate scraps of tone into fragments to compose the whole pieces.

Wagner's and Sibelius' vague "aboutness", giving a single-mindedness to the lyrical qualities, unfolds in different shades of Firstness in later composers. Against the Wagnerian flamboyant and expressionist associations of this time, there is the Firstness of Eric Satie's (1866–1925) simple piano chords, played alone in the miniatures of *Gnossiennes* (1890–1897), *Gymnopédie* (1887–1888), and many other quiet piano pieces (Whittall 1988: 196–197). The rhythmic pulse has a classic but obscure feeling of spiritual release, a sign of pure Firstness. The indeterminate duration (tempo), also a sign of Firstness, is left to the pianist: there is the "fast" interpretation of Aldo Ciccolini (ex. Satie 1971 [1966]) and the "slow" performance of Reinbert de Leeuw (ex. Satie 1995). Satie's balancing silence of the tones and passages makes

for an overall melodic simplicity that has become the trademark of Satie's quasi-mystical music. Making a living as a bar pianist, Satie's adult years were devoted to religion and politics. He composed for the *Ordre de la Rose-Crois Catholique* and was the founder, member, and composer of the French church, *Eglise Métropolitaine d'Art de Jésus*. On the other hand, Satie also wrote cabaret and ballet music. Although later audiences were impressed by the intensity of his piano music, despite or because of the recurrent clichés, they were also baffled by Satie's First monotony of tonality, chromatism, and tempo.

Olivier Messiaen's (1908–1992) *Éclairs sur l'au-delà* ... (composed in 1987–1991) is another contemporaneous exponent of globalized Firstness, composed by a modern French composer, organist, and ornithologist. This orchestral piece is Messiaen's last work (ex. Messiaen 2004; Hill and Simeone 2005; for previous works see Whittall 1988: 216–219, 226–231). Messiaen was a religious (Catholic) composer and his musical testament depicts the illuminations of "flashes of the beyond" (tr. of *Éclairs sur l'au-delà*) to reach Paradise. Messiaen was totally "dedicated to the task of reconciliating human imperfection and Divine Glory through the medium of Art" (Whittall 1988: 216). The natural, but musically not "simple", Firstness of Messiaen's music had no fixed metric scheme, while he lengthened and shortened the tempo of the note or fraction, while repeating magical sounds of non-European music as well as a musical versions of bird sounds. Using a series of undetermined meanings in his essential Firstness, Messiaen engineered the 11 movements of *Éclairs sur l'au-delà* ... to reach Paradise. Messiaen was an untraditional composer and he wrote this new serial music (Holtzman 1994: 88–91) to illuminate his own "natural" and "supernatural" tastes.

Messiaen seemed to prefer the abductive mood of the tribal ideas of the great Assyrian, Sumerian, and Indian cultures, including their astronomy, numerology, and bird songs (Gorlée 2008a: 157–159, 174). Tarasti (1979: 116–117) called Messiaen's (earlier) style an "exotic" mythology, meant in the structural sense of mystic versus natural signs. Within Peirce's semiotics, Messiaen's musical experimentation and avant-garde exploration is a prolonged musement based on Peirce's

Firstness. The interpreters (director, musicians, listeners) must appeal to their feeling and emotion to understand Messiaen. By the way, Peirce called his *Éclairs* an illuminated "flash", meaning for Peirce an "abductive suggestion [...] an act of insight, although is extremely fallible insight" (CP: 7.181; compare Peirce's favorite term "flash" in CP: 1.292, 1.412–413, 2.85, 4.642, 5.45, 7.36, 7.498, 8.41–42). The flash is known, but the object of the flash is in part unknown. Similar to the episode of the chapel bells, the sign (and sign-fragment) can be repeated and the repetitions accumulate towards a final manifold. In other words: the composer Messiaen gives access to the supernatural and his musical way makes a path to nature or God.

Linking Sibelius' and Messiaen's engineering of notes and fragments to Wagner's *leitmotif* structures, this compositional process is also applied to the spare and alert tones-and-durations of Henryk M. Górecki's (b. 1933) musical work. During three decades, Górecki lived under the Communist control of musical aesthetics in Poland, but despite his antipathy to the Communist authorities and the ideological environment in which he lived, he followed his own new radical direction from 1960 on, until he became internationally known from 1990 on (Thomas 1997). Górecki's music builds a bridge from liturgy and folksong from Silesia in the Bohemian Tatra Mountains to his avant-garde pieces of a free serial technique. His musical style is derived from past culture and folklore in his homeland, Poland, but is modernized in Górecki's theological works with a mystic view. His *Third Symphony* (Op. 36) with the English title *Symphony for Sorrowful Songs* for soprano and orchestra in 1976 (ex. Górecki 1994) was a silent lament of war in the face of death (Thomas 1997: 81–94). It was followed by *Lerchenmusik* (Op. 53, 1984–1985) and *Arioso* (from *Quasi una Fantasia*, Op. 64, String Quartet No. 2, 1991; ex. Górecki 1995b; see Thomas 1997: 120–128, 135–144). Górecki had a fascination with all kinds of percussion instruments and introduced in his choir works the punctuating rhythm of the church bells, see also his *Kleines Requiem für eine Polka* (Op. 66, 1993; Thomas 1997: 144–149, for church bells 47; ex. Górecki 1995a).

Górecki's technique is an "elemental" or undecided style with a seemingly modal simplicity but with an extremely compositional complexity. His pure Firstness becomes an interplay of fast tempos with slow sections, where melodic motion is suspended. The apparent lack of motion (his silence) in which the "general lack of motivic consistency — despite a degree of spasmodic intervallic correspondence — gives the work a loose, improvisatory air", forming a parallel to church chanting (Thomas 1997: 27). In an interview in 1968, Górecki said that "all [compositions] tackle the same problem, that of putting the most stringently restricted material to maximum use" (Thomas 1997: 55). Despite the scrupulous economy of minimalism, the tonically static sound material of the simple and motionless major-minor chords (Firstness) builds in intensity to become dissonant with harsher sounds to achieve a speed in configurations and sequences (Secondness) to build up the definitive (never final) moment of Thirdness.

Like the composers in Firstness in music, new visual languages also pioneered in other arts. The nineteenth-century Romantic painting offered the broad impressions of nature of William Turner (1775–1851) announcing the twentieth-century impressionist painter, Claude Monet (1840–1926) with his own indistinct pattern of color areas, and the expressionist and symbolic Norwegian painter, Edvard Munch (1863–1944) — later, followed by a group of abstract (that is, non-representational and non-objective) painters, such as Wassily Kandinsky (1866–1944) and others (Holtzman 1994: 69–84). The mystical Firstness of the painture of almost "nothing" adds an undetermined sparkle of light and colors with colored shadows, and creates new signs and new objects in the visible images, suggesting a possibility of interpretants.

William Turner (1775–1851) worked as an aquarellist and later as a painter. The sea and Alpine landscapes of his late works were, however, composed not from real life but *impromptu* before the finished design, taken from the many vistas of Turner's sketchbook drawings made on the natural spot. The totality of 20,000 watercolor studies, such as *Landscape with Water, Norham Castle, Sunrise, Sunrise over the*

Waters, *Sunsetting over the Lake*, *Snow Storm* and many others were made as his private work, and were not appreciated by his contemporaries as sellable art (Reynolds 1976: 139–149, 186 ills.). Turner's improvisatory epoch with purely chromatic watercolors without any fixed contour but with sketched blots, lines, and stripes is now called his important (and capitalized) "Colour Beginnings" (1820–1840) by the Turner Bequest of the British Museum. Turner's drawings are "thrillingly minimal and airy" traces (Updike 2008a: 14) of

> [...] the main ingredients of painting, form, light and colour [...] making steam, smoke, mist [...] So in the later finished pictures he [Turner] composes in colour, dissolving, suggesting, and only half-defining, form; in his private exercise he composed in coloured washes alone, virtually excluding any reference to the forms of nature, unless we regard them as veiled areas of sky, earth, and sea. (Reynolds 1976: 146, 149)

Some of the ambiguous "beginnings" of the First landscapes were probably later "helped" by Turner to form a Second whole: see what he did to his miraculous *Sunrise with Sea Monster* (c.1840–1845), which originally was an indeterminate *Sunrise*. At some point, the spare form was thought to be "unfinished" and in order to form a completeness, Turner added in the center the form of a cryptic sea monster (Warrell 2007: 198). Turner's unprepared Firstness can be prepared for Secondness, when necessary (Updike 2008a).

The response from the realistic Impressionist painters, particularly Claude Monet (1840–1926), was to follow Turner's example to paint the fleeting impressions of what the word Impressionism meant. Monet's oil on canvas of 1872–1873, called *Impression, Soleil levant* (*Impression, Sunrise*), is a rapid rendering of a seascape drawn in free and loose brush strokes and colors. Monet depicted a harbor at dawn with the seascape, small boats and quayside cranes, with the sun coming up (Delafond and Genet-Bondeville 2002: 18–19). *Impression* looks absolutely Turner-like. By 1897, in paintings such as *Vétheuil dans le brouillard* (*Vétheuil in the fog*), Monet painted in Turner-like strokes the village Vétheuil on the cliffs of the right bank of the Seine with an eerie shadow of its *château* (Delafond and Genet-Bondeville

2002: 30–32). Beyond these and other paintings or pastels, the quick pencil sketches of his notebook were full of penciled pages. They were "unknown" sketches, but they brought to light "unknown facts" about Monet's painting life and about "the far greater part that drawings had in his career than previously thought" (Herbert 2007: 31). Monet used his soft-gray drawings as his "private space" to be used as "spontaneous" preparation for his known oils on canvas. The drawings are absolute Firsts; they give "no hints of tonal structure, color or detail" but are inaccurate "memory clues" of visual ideas (Herbert 2007: 31–32). The drawings are recently exposed and analyzed for the first time in the Monet's collections of the *Musée Marmottan* in Paris.

Monet's collection of water lilies is the best example. He painted the series of *Nymphéas* (*Water Lilies*) in his own garden at Giverny from 1897 until his death in 1926 (Delafond and Genet-Bondeville 2002: 59–101). Nearly blind, Monet worked

> [...] on his giant canvases in a windowless studio, he brought back the sketchbook and independent drawings he made at the edges of the pond to serve as memory clues while he painted [...] Some of them probably guided initial compositions, which were then developed and altered over sessions that lasted months and years. (Herbert 2007: 32 ills.)

By now, times have changed and "most museum visitors have learned that Monet's pictures ostensibly devoted to spontaneity were actually constructed with the cunning of a gifted craftsman" (Herbert 2007: 32). He accurately used the evocative drawings of his first pastels made before of the country scenes, seascapes or fishermen, and his conceptual sketches announced the postimpressionists as Paul Cézanne's (1839–1906) distortions and Vincent van Gogh's (1853–1890) flamboyant colors to end in the totally modern art of the twentieth century, disrupting in the purist Dutch painter Piet Mondriaan (1872–1944), whose non-figurative technique concentrated on geometric precision. Remembering traditional Islamic art, Mondriaan's abstract paintings are the pure geometries of horizontals, verticals, and diagonals, eliminating brushstrokes, away from the contours of life and reality — pure Firsts.

As final example of artistic Firstness, the innocence and mystery of Firstness is pictured by Michelangelo Antonioni's (1912–2006) film *Blow-Up* (1966, ex. 2005). In the film, the unreflective limitations of Firstness traverses the ambiguity of reality, just as human reality seems to be for the possible self. The visual interface of *Blow-Up* is a quest of imagery without many words, interpreting fantasy into reality to bridge the gap between pattern and process. The stream of consciousness of the film gives ample room for the viewers' own interpretation of what happened (or not happened) in the famous images of the episode of the park. One day, a high-fashion photographer becomes bored with fashion and takes pictures in a deserted park. Against the bushes, he takes photos of a lover's rendezvous. The next day, the woman asks him for the ilicit photos. The images that he has unwittingly witnessed have an invisible scene of sexual intrigue. When the photographer *blows up* several pictures from the park, the magnified pictures reveal a potential or real murder happening in the shadows of some bushes. Further *blow-ups* from negative to poster uncover what could be an image of a dead body.

Not only is Antonioni's avant-garde film a fascinating portrait of the "swinging" London of the 1960s, with drugs, sex, and wild parties, the filmic world also constructs with the visual observations, fallacies, and deceptions a spiritual thriller with an accidental death. The detective images of a photographer wandering with a camera in his hand through the park are followed by his investigative techniques and mind-binding magnified images in his studio to see the misadventure of the "real" truth. Yet the truth of the image-maker's lens, doubly mediated by Antonioni's camera as well as the view of the spectators of the film, leaves the aesthetic still-image of the park with practically nothing — again a pure First. The visible-invisible and the representational-unrepresentational images do give some evidence but provide no proof of the murder (Gardner 2002).

Blow-Up (1966) was a modern avant-garde film discussed in Metz's book *Film Language* (Metz 1974: 185–227, in the original French ed. of 1968) and more specifically in Lotman's article "Problems of semiotics and directions of contemporary cinematography" (Lotman

1976: 97–106; originally published in 1973 as *Semiotika kino i problemy kinoestetiki*), seen from structuralist semiotics. Metz (1974: 193–194, 185) spoke about "dead spaces" within the main scenes of the film, where the movement has filmically turned into a non-dramatic story, the Firstness of doing "nothing" in the quiet park. The breakdown of the narrative syntax of semiotic events makes that "nothing" is turned into the freedom of undetermined Firstness. Firstness is involved in the random scenes that imply "nothing other than a non-codified mobility of the camera, a movement that is truly *free*" (Metz 1974: 48).

Lotman took a contrary view of Metz's "dead spaces" and he attempted to "capture the face of contemporary life in unposed, unarranged and documentary-like" cinema (Lotman 1976: 97). Lotman observed that *Blow-Up* offers the frozen images of (transposed into Peirce's terminology) an unfulfilled First, contrasted with the semiotic nature of moving (photographic, motion-picture, etc.) images fulfilled into Secondness. The film wanders around the party scene of London as a travelogue of the wandering and struggling signs of Secondness. Yet in the central episode of the images of the lonely park, the viewers are given the broad field of vision of the bushes and the kissing couple. The episode is pictured by the accidental photographer, taking spontaneous (non-professional) close-ups to please himself. The random scene in the park remains uninterpreted Firstness in itself. The "realness" of the "document about reality" (Lotman 1976: 98) lies in the photographs taken and the film images themselves.

The mystery raised by *Blow-Up* is half-cleared up by the *blow-ups*. Lotman (1976: 103) wrote that the photographer was a "modern chronicler" acting as a

> [...] criminologist [working] with a photodocument and a visual aid in researching the semiotics of depictions. [...] Ordinarily both the historian and the criminologist see their task as the establishing of life from a document. Here a different task is formulated: to *interpret* life with the aid of a document, since the audience has seen for itself that direct observation of life is no guarantee that profound mistakes will not occur. The "obvious" fact is by no means so obvious. (Lotman 1976: 100)

The film is an abductive metatext, with a wider degree between chaos and order. The meaning of the film is what can happen to under-developed and open-ended Firstness. This makes that meaning in artistic signs stays conjectural and that there is (and will not be in the future) no absolute truth in art.

8. Concluding remarks

The painters, composers, and film-makers discussed explain the rise of the abductive "'art of the fact" which has opposed the 'art of the ideas'" (Lotman 1976: 103), from outside ideas to inside things. This abduction signifies not logical reasoning but is backward reasoning, a mythology based on hunches and guessing, whereas the emotional overtones build opportune opportunities of both "may" and "maybe not". In Peirce's semiotics, the art of the inside thing could suggest art for art's sake, but not exactly:

> Only in the Western world is art produced for art's sake, to be hung in museums and galleries or to be performed in concert before large audiences. In the societies that anthropologists typically study, art is embedded in the culture. It is actively used in the performance of ceremony and ritual, and the meanings the art is communicating relate to the meaning of the ritual and the mythology associated with it. (Rosman and Rubel 1989: 222)

A work of art is a visible and functional fact, not only displayed in the organized exhibition of museums but everywhere. If any generalization can be made about this long history of art, it is perhaps that the idea of perfect form combined with simple substance has already prevailed.

The engaging simplicity of the themes of Firstness (from pre-Firstness) has the genius for transmuting the mystic view of fresh ideas into poetry. Evaluating the instrumental naturalism of physical and spontaneous undegenerate art and coming face-to-face with an anthropological vision of pseudo-art, the word of art reaches the

principal mode of artistic expression of a creative artist — from double to single degeneracy. The work of art creates the meaning of a single monolith in a minimal (or perhaps monumental) created object that in the undetermined interpretants explores the secret qualities that seem actively involved in the sign and the object, emerge in the (still undetermined) interpretants. In the practical example, the bronze bells with the natural associations of their sounds, the (dis)ambiguity of the vague *riflesso* (reflex) of the vaguely liturgical — romantic, nostalgic, religious, mystic, atavistic, archaic — icons produce in the viewers-listeners an emotional ecstasy; but since the work of art is and will remain a fictional task, the meaning of Firstness is too narrow, and the real truth can be far away from the epiphany. The sporadic transformation (transition, translation) process of making and giving further cultural meaning(s) arises from the exterior context, that is the motivic words and fragments indicating the self-contained and self-referred qualities of Firstness, directing to an awareness of Secondness. The artistic signs with their partially known and unknown objects acquire in the mind of the attentive receiver (reader, listener, visitor) improvisatory and possible interpretants.

The spare sign of pure Firstness gives a pseudo-religious (or a mystic, spiritual, or animistic) feeling to the vagueness and abstraction of the work of art. The minimal significance of human emotion could transform "upwards" into Secondness, concentrating on the real state in the sign's reality. In Secondness, the sign can episodically unfold into a more complex mood, key and material, thereby in advanced stages receiving all kinds of spiritual or temperamental interpretants, invoking primitive rites and judging the artistic composition made by individual artists. The fragments of Firstness conjure something for nothing. The musement of something and nothing starts with the prehistoric and pre-industrial, yet visionary, impressions of the nature-mythical passages: reprising the primordial flux of Creation with the basic qualities of the innocent Firstness of Nature, yet with a hidden and creative focus of achieving real Secondness and touching the formal rules of Thirdness. The moments of minimalist Firstness contain the spiritual principles of the human person to achieve the

cosmos. Seeing, hearing, listening, and touching in the artwork the magical moments of self-concentration is the direct experience of the oneness of the sign's qualities. Totally, within and beyond ourselves as sign receivers, Firstness proves a vague, unfulfilled sign, ready to fulfill the total sign-semiosis.

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Набросок категории Первичности Пирса и ее значение для искусства

Данное эссе рассказывает о создании и развитии пирсовских трех категорий, сосредоточиваясь прежде всего на Первичности, на ее базовой формуле «воздушного ничто» (CP: 6.455), которая действует как фрагмент Вторичности и Третичности. Категории чувствования, хотения и знания не являются обособленными, они действуют во взаимосвязи с тремя интерпретантами. Интерпретанты действуют в качестве элементов триады благодаря принятию, изменению или перемене верований. В произведениях искусства первое дыхание Первичности вызывает спонтанную реакцию *musement* , где эмоции выражаются без сопротивления фактов Вторичности и применения

логики Третичности. Основные качества туманного и неясного слова, краски или звука несут свои мимолетные значения в Первичности. Первичные качества вкуса, взмаха кисти, тембра, краски, точки, линии или прикосновения слишком скудны, чтоб на них строить логику эстетической оценки. Возникновение искусства Пирс объясняет ростом «невырожденности» (*undegeneracy*) в групповые и индивидуальные интерпретанты и возникновением констелляций единичных и двоичных форм вырожденности (*degeneracy*). Обзор «проблесков» Первичности сопровождается множеством примеров ее проявления в произведениях искусства (литература, музыка, скульптура, изобразительное искусство, кино). Настоящий анализ является первым этапом на пути изучения Первичности в искусстве.

Visand Peirce'i Esmasuse kategooriast ja selle tähendusest kunstidele

Käesolev essee räägib Peirce'i kolme kategooria loomisest ja arengust, keskendudes seejuures esmajärjekorras Peirce'i Esmasusele, tema "õhulise mittemillegi" alusvalemile (CP: 6.455), mis toimib Teisesuse ja Kolmasuse fragmendina. Tundmise, soovimise ja teadmise kategooriad ei ole eraldiseisvad üksused, vaid toimivad vastastikuses koostoimes kolme tõlgendiga. Tõlgendid toimivad kolmiksuhteliste elementidena tänu sisseharjunud uskumuste kasutamisele, muutmisele või ümber tegemisele. Kunstiteostes kutsub Esmasuse esimene hõng esile "mõtiskluse" (*musement*) spontaanse reaktsiooni, kus emotsioone väljendatakse ilma faktilise loomusega Teisesuse vastuseisuta ja loogilise Kolmasuse osaluseta. Ähmase ja ebaselge sõna, värvi ja heli põhiomadused kannavad oma põgusaid tähendusi edasi Esmasuses. Esteetilise objekti maitse, pintslitõmbe, tämbri, värvi, punkti, joone, tooni või puudutuse Esmased omadused on liiga napid, et nendele ehitada esteetilise hinnangu loogikat. Kunsti tärkamist seletab Peirce'i *eba-degeneratiivsuse* (*undegeneracy*) kasvamine grupiviisilisteks ja individuaalseteks tõlgenditeks ning degeneratiivsuse (*degeneracy*) üksik- ja kaksikvormide konstellatsioonide moodustumine. Esmasuse välgatuse ülevaates tuuakse näiteid paljudest kunstiteostest nii sõnas, muusikas, skulptuuris, maalis kui filmis. Käesolev analüüs on esmane abimees primaarse Esmasuse uurimisel Kunstis.

Action in signs

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Abstract. The present article discusses sign typology from the perspective of action which is conceived as having a sextet structure. The relation between means and purpose in action is analogous to the relation between sign and meaning. The greater the degree in which the action has purpose, the less tool-like the action is. Peirce's trichotomies correspond to a fragment of the sextet structure.

It is a common knowledge in contemporary Peircean semiotics that sign processes, or semioses, are due to signs' acting[1]. In this paper we take the word 'action' seriously, proceeding from the paradigm of integral human action, and seek for the substantial basis of the sign phenomena in the framework of action.

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[1] One of those who love to stress that is John Deely (e.g., Deely 1990: 11; Deely 2005: 26; Deely 2008). In a similar sense the word 'action' is used in Peirce's text 'Pragmatism' (1998 [1907]: 411). To contrast semiosis (often named 'sign-action') to the ordinary 'action of brute force' he writes: "But by 'semiosis' I mean, on the contrary, an action, or influence, which is, or involves, a coöperation of *three* subjects, such as a sign, its object, and its interpretant, this tri-relative influence not being in any way resolvable into actions between pairs" (Peirce 1998 [1907]: 411). We will use the word 'action' in a different sense, having in view a direct analogy with human action.

In our earlier publications we introduced the method of sextets, particularly for classification processes in semiotics[2]. Here the same framework is reintroduced for the analysis of action in order to throw more light on signs.

Typology of action

We proceed from the idea that the structure of action is constituted by variants of "proportion" of means and purpose[3]. That is, we conceive that action occurs synchronically on levels differing in how strongly purposeful the action on that particular level is. Besides, action grows towards perfection going through different stages, becoming more and more purposeful. Purpose in action is conceived to have a role analogous to the role of meaning[4] in sign processes. This throws new light on the concept of sign.

Let us take a closer look. Commonly action is conceived to combine a technical aspect and a purposeful, or alternatively put, meaningful aspect. The purpose gives meaning to the means. In the most familiar and common case we choose means in order to achieve some goal. To have a goal, we need to be oriented in the world by means of some model or picture. However, that model is a substitute for the world rather than a means in the sense we imply here. The model is where we specify and describe our goal, that is, the state of affairs we are striving for. We also project our actions into the world, knowing (or imagining) their causal effects.

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[2] For the last version of the method of sextets see Luure 2008.

[3] In Luure 2008, types of signs are analogously conceived according to the relations between two items called 'sign' and 'meaning'. The differences between the types of those relations can be characterized as differences of proportion of 'sign' and 'meaning'. Where there is relatively more meaning there the sign is more meaningful.

[4] 'Meaning' is meant to be an umbrella concept for different semiotic relations. Intuitively, 'meaning' is what is both revealed and covered by the 'sign' and renders the 'sign' 'meaningful'.

Now, in order to really act, we need skills, that is, something we can implement without thinking them through. Our deliberate choices are reduced to choices between skills to be implemented. Those skills constitute the technical aspect of our actions. For example, when I go somewhere by foot then the place of destination, and occasionally the route, are goals (or maybe I change my mind halfway); what is my means is the walking skill itself with its variants, like different speeds and directions. Or, to take a linguistic example, in speaking my means are the vocabulary and the grammar of the language (which I master[5]) and the goal of talking is to convey a particular message. To this end, I compose a sentence out of words.

Let us extend this common conception. I take it that the whole of actions consists of levels, each having its own type of purpose, or in other words, its own way how means and purpose relate to each other. In the above example, in skills the means and purpose appear to be indistinguishable: exercising a skill is just exercising a skill. In contrast, in striving for a goal the means and the purpose seem to be sharply contrasted. We also can put it that exercising a skill appears to have a meaning in itself, whereas in striving for a goal the same exercising has its meaning in the goal. In other words, just exercising a skill is another level of action with its own purpose and its own meaning, contrasting with the purpose and the meaning related to the goal. We are going to list the levels of action with the help of an example.

In our example the common theme is need for light. In this context, action is presented as a process leading to the satisfaction of the need[6]. First of all we should ask ourselves how far could the difference of the above two levels be extended. We can see that just exercising a skill has, as it were, less meaning than striving for a goal but, on the other hand,

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[5] Vocabulary and grammar are embodied in my technical language skills, and so it is my skills that should be called my means. On the other hand, they are tools, and in this capacity they do something instead of myself, substituting for myself.

[6] It might seem that a need is basically the same as a goal. We are showing the growing depth of the way of satisfying the need: the goal only emerges in this process and the need turns out to be irreducible to goals. Thus, different levels of needs are revealed that are equivalent to the levels of action and levels of purpose.

its meaning is closer to the very action. We are going to extend the scale in the same terms.

Level One. Zero action. So we are to seek for the most meaningless action which at the same time has the meaning closest to the very action. This should be zero action where no proper action is left, just being.

Zero action corresponds to the situation where it is granted that the need is met. When light is granted, one need not undertake anything. Moreover, this situation embodies lack of need: the need is no need here. Light as the "object" of need is not distinguished from the agent and its action.

This type of action is the minimum type of action and the background of any action as its lowest level and ultimate tool. All other levels and types of action are built upon this zero action. Any action is ultimately realized by zero action.

It is in itself meaningless and purposeless as it is indifferent to any meaning or purpose since these could be whatever, the action remaining the same. On the other hand, this zero action completely coincides with its purpose, taking to the absolute the apparent coincidence with the purpose in the case of exercising a skill. The agent coincides with its tool.

Level Two. Tracking action. Imagine now that an agent is looking for light, simply following the gradient of light brightness or in some other way following (or imitating) its environment. If that is it, the agent does not know what it is doing; it is just following. The meaning is placed in what is followed.

Another, more general example of tracking action is imitating another agent. Indeed, even the realization of the physical laws of nature could be conceived of as tracking action. This is because the substrate of the laws (the 'matter') continues its existence by tracking itself according to the laws. This tracking is the way it exists. In contrast, any particular state to be changed can be conceived as zero action. So, the laws represent the character of a level two agent.

Tracking action is like the continuous existence of an agent that perishes when the tracking stops. When tracking is resumed, it is the birth of another level two agent. For biological agents, tracking action is not the highest level of action and the identity of the agent depends on a higher level. Tracking is realized by some 'subagent' (tool).

Tracking action presupposes zero action as its background. Tracking action can be conceived as an 'ideal' zero action with a 'changing' identity.

Level Three. Functional action. This third type of action is what above was called exercising a skill. This is a procedure or a tool, which has a function in a framework of functions. It functions like people in language games (Wittgenstein 1953) or animals in their Umwelten (Uexküll 1957).

When I need light I might possess a special light organ or a special tool (called lamp). This organ or tool has a function and its action is of the third type. Though it might seem that the tools appear only now, it is just the functional character of the tool that emerges. It is important to see that the tool as an agent is less tool-like (more independent) than the agent of the second type, let alone the agent of the first type. This is because tools of higher types themselves possess more purpose (and meaning).[7]

Tracking actions are involved as 'subactions' in the functional action. Functional action can be conceived of as an 'ideal' tracking action where the 'ideal' prototype of function is tracked.

Level Four. Goal-oriented action. The fourth type of action is goal-oriented. Above we called it striving for a tool.

It is also possible to delegate this to a tool. For example, I can describe the light conditions I want and to make an automatic feedback-based tool to take care of these conditions.

Functional actions are involved as subactions in the goal-oriented action. Goal-oriented actions can be conceived of as 'external'

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[7] Emmeche (2002) tried to tie the sign character of the living with functions.

functional actions where the 'function' is defined in terms of an ideal state.

Level Five. Action proper. The fifth type of action is exemplified by the situation where I cannot exhaustively describe what kind of light I want. Then I have to confront myself in action with the very real world rather than my models of it. Even in this situation, someone might act as my "tool" and "servant" and understand what I really want. Here there is especially much of purpose (meaning) but it is especially far from the action. The action is on the limit of understanding, therefore substantially independent of it and belonging to the real world. There are no particular patterns to be acquired.

Goal-oriented actions are involved as subactions in the action proper. Action proper can be conceived of as goal-oriented action with an indescribable goal.

Level Six. Result action. The sixth type of action is related to what I really need rather than want and believe to need. This is the most purposeful and most meaningful type of action. It transcends me such as I know myself. In this action I, still wanting light, may not get it as I really do not need it (for example, when I want light for reading I might need sleep). Imagining a tool (servant) performing such action, my servant has become my master.

In contrast to the zero action, here we have the most meaningful action that at the same time has the meaning furthest from the very action.

Unlike in the case of zero action, no determinate modification of the result action can take us closer to the satisfaction of our need. What is needed is absolutely different (independent) from the agent and the action.

In contrast to the zero action, the meaning and the purpose are entirely embodied in the very action. On the other hand, its purpose remains entirely beyond the action, the action being absolutely a mere tool.

From the point of view of the result action, everything is as needed despite of and independently from one's efforts to meet one's needs. Those efforts are a part of everything's being as needed, like anything else. Similarly to the zero action, it is granted that the needs are met, but now this is not due to either the unpretentiousness of the needs or the monotony of the environment but the utmost integration of the universe.

Action proper is a subaction of the result action. Result action can be conceived of as the result of the action proper.

These levels of action show a progression towards more universal action. The more universal is the action, the more complicated environment it meets. Each level can be conceived of as a particular strategy, and each strategy may be optimal in some circumstances. The overall evolution shifts the action's focus (as if the 'agent's' locus) more and more away from the physical substrate of the action and renders the action more and more integrated.

Action and signs

We propose that signs should be seen in the overall framework of action. Signs are not to be thought of as something emerging from 'natural', non-semiosic processes or just somehow present everywhere. Signs are there as an aspect of action. It is action that should be presupposed in any talk of signs. As in the above example, the concept of action should be extended to involve all levels and types of action, including zero action.

In the Peircean tradition, the sign is defined as a relation between the representamen, the object and the interpretant. This idea could be extended. As we associated meaning with purpose, action could be treated as a hexadic relation between six levels of action, resulting in a hexadic relation between meanings of different types. So we have a different, "vertical" sign relation that is directly related to action.

Peirce's writings contain a similar idea though he does not associate it directly with sign relations. In his most well-known sign typology (Peirce 1998 [1903]), Peirce's first trichotomy defines whether a sign "in itself is a mere quality" (qualisign), "is an actual existent" (sinsign), or "is a general law" (legisign). Peirce indicates that qualisigns need to be embodied in sinsigns in order to function as signs. On the other hand, legisigns need to come in replicas that are sinsigns. There are two directions in which different types of signs hierarchically depend on each other.[8] In sign processes, the first direction can be taken as going from means to purposes. The three types of sign listed here form a hierarchy that is analogous to the hierarchy of the third, fourth and fifth levels of action and the hierarchy of the same levels of speech. The qualisign, the sinsign and the legisign are exemplified by the meanings occurring on the corresponding levels of speech. So this trichotomy could be extended to a sextet covering the full scale of ontological options.

It seems that sign processes and action processes have essentially the same six-level hierarchy that is exemplified particularly in the levels of speech[9]. This hierarchy is, as it were, world-encompassing, so that all hierarchies meet in the extremes. The two extremes are the underlying "meaningless", "purposeless", "lifeless" background and the overarching "all-meaningful", "all-purposeful", "all-lifeful", "foreground".

We propose two dimensions of sign relations. The 'vertical' dimension represents the sign relation as the structure of action. The 'hori-

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[8] See Peirce 1998 [1903]: 291.

[9] In short, the types of meaning (corresponding to the levels of speech) in speech are as follows: 1) the zero-degree meaning where there is no meaning outside the signs; 2) the repetitional meaning that depends on the possibility of repeating phrases and sentences on a purely phonological basis; 3) the categorial meaning that involves vocabulary and grammatical categories; 4) the referential meaning that involves the things the words stand for; 5) the poetical meaning that involves meanings realized with the indispensable help of language; and 6) the mystical meaning that involves what is totally inexpressible but nevertheless gets meant. (See Luure 2008: 497–500 for a longer presentation).

zontal' dimension involves the semiosis with its triadic sign relation. Our hypothesis is that the sign relation can be extended to a hexadic relation as well. Peirce describes the sign as a relation between three things. Peirce's trichotomy truncates the sextet structure, omitting the levels preceding the category (in the sense of the result of categorisation[10]) as a possibility. The first item in this sextet should be 'possibility' without any range, a 'quality' without any qualitative determination. The second item should be underway of categorisation, without any fixed quality; qualities are there only in mutual comparison. The sixth item should be an entity the laws depend on.

The threshold of life: when are tools alive?

In this context it is interesting to consider the problem of the threshold of life, which for most biosemioticians has been answered by Sebeok's Thesis (Kull, Emmeche, Favareau 2008: 42) according to which life and sign processes are coextensive.

It seems that, in terms of our hierarchy of levels, the minimum of life is placed on the third level, the functional level. So the question arises how can living functional action be distinguished from non-living functional action. It seems that the question of the semiotic threshold (and life threshold) is to be replaced with other questions, such as: when are tools alive?

In any case, the whole of life as action is understandable only so far as we include its tools on all levels of its action.

Evolution of signs

Another problem is the origin of the sophisticated human signs in more primitive and more 'natural' signs. It seems that this is possible only in the integral framework of action where the meaning of the

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10 See, e.g., Kull 2002.

lower levels is revealed by higher levels. The 'origin' is the underlying character of the signs of lower levels: each next level somehow disconnects the continuity of evolution. This exemplifies the following dilemma: either the signs have always been there in their present full-blown form but only potentially[11] or new types of signs have emerged from the old ones but there is no proper continuity between them.

Our approach seems to enable to unite the two horns. The whole of the action has always been there but the levels of action and the types of signs have revealed themselves gradually. Each level of action corresponds to a historical stage in which the purpose of the action is not revealed beyond the particular level. Any emerging level gives a new meaning to the previous ones.

Conclusion

In the talk of sign's action we introduced a new account: the subject of action is the 'vertical' sign relation as the whole of action rather than some item involved in that action. So the sign relation itself is action as well as the subject of action.

It takes further research to specify how the hexadic structure of the 'vertical' sign relation is replicated in the 'horizontal' sign relation and how the Peircean trichotomies can be extended to sextets.

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[11] It seems that this is the position of Deely (2005).

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Деятельность в знаках

Типология знаков рассматривается в свете секстетовой структуры деятельности. Отношение средства и цели в деятельности аналогична отношению знака и значения. Чем в большей мере деятельность наделена целью, тем менее она подобна деятельности, свойственной орудию. Пирсовы трихотомии соответствуют фрагменту секстетовой структуры.

Tegevus märkides

Märgitüpoloogiat vaadeldakse tegevuse sekstetistruktuuri valguses. Vahendi ja eesmärgi suhe tegevuses on analoogne märgi ja tähenduse suhtele. Mida suuremal määral on tegevusel eesmärki, seda vähem sarnaneb ta tööriistale omase tegevusega. Peirce'i trihhotoomiad vastavad ühele sekstetistruktuuri fragmendile. Tegevus on tegevustasandite vaheline suhe, mis ongi ühtlasi tegevuse "subjekt".

Sign Systems Studies 37(1/2), 2009

Translating Jakob von Uexküll — Reframing *Umweltlehre* as biosemiotics

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Abstract. Thomas Sebeok attributed it to what he called the 'wretched' translation of Uexküll's *Theoretische Biologie* (1920) that the notion of *Umwelt* did not reach the Anglo-American intellectual community much earlier. There is no doubt that making more of Uexküll's *Umweltlehre* available in English will not only further the biosemiotic movement, but also fill a gap in the foundational theoretical canon of semiotics in general. The purpose of this paper is to address issues of terminology and theory translation between Uexküll's *Umweltlehre* and current biosemiotics.

Jene reine Sprache,
die in fremde gebannt ist,
in der eigenen zu erlösen,
die im Werk gefangene
in der Umdichtung zu befreien,
ist die Aufgabe des Übersetzers.
Walter Benjamin (1972 [1923]: 19)

1. Unlocking the *pure language* of Uexküll's *Umweltlehre*

Upon the opening of the *Jakob von Uexküll-Archiv für Umweltforschung und Biosemiotik* in Hamburg in 2004, Jesper Hoffmeyer as one of the preeminent interpreters of Uexküll's *Umweltlehre* believes that Uexküll's work is still "in need of clarification" and that the "biosemiotic reframing of biological theory", that has only taken its

first steps, "can be fruitfully informed by the work of the pioneer" (Hoffmeyer 2004: 74). His hope for the archive was that it could be a "meeting place between historical writings and emerging new agendas" (Hoffmeyer 2004: 74). The purpose of this paper is to address some insights and concerns related to an Uexküll translation project; and to determine how translating Uexküll's work will contribute to the *clarification* and biosemiotic *reframing* of Uexküll's *Umweltlehre*.

In his essay *The Task of the Translator* Walter Benjamin (1923: 1) defined translation as a change of *mode* of expression, a new arrangement or a new form. He described the *translatability* of any work as a specific significance inherent in the original that is the *pure language* or the theoretical or philosophical core of what is to be translated. He proposed that the task of the translator was "to release in his own language that pure language which is under the spell of another, to liberate the language imprisoned in a work" (Benjamin 1969 [1923]: 79–80).

In the context of biosemiotics, Donald Favareau recently gave an excellent illustration of Walter Benjamin's notion of *pure language* that allows the translator to liberate the theoretical or philosophical core by translating a passage from Aristotle to show that his views in *De Anima* are more akin to the recent scientific drift than any other period. Favareau proposed that "a modern gloss of Aristotle's famous dictum that '*the soul is the first actuality of a natural body that is potentially alive*' might today read '*life is the emergent system property of the interactions of a self-catalyzing system that can adapt to its environment to persevere*'" (Favareau 2007: 9).

With this translation, Favareau is "reclaim[ing] the evolutionarily coherent notion that the appearance of humans with their unique kind of mental experience is itself a product of a legacy of sign relations arising out of animals' interactions with each other and with the external world" (Favareau 2007: 10) in order to present biosemiotics as a *proto-science* whose goal is

> to extend and broaden modern science, while adhering strictly to its foundational epistemological and methodological commitments — it

> does not seek in any genuine sense of the term to 'oppose' much less 'supplant' the scientific enterprise, but, rather, to continue it, re-tooled for the very challenges that the enterprise itself entails, if not demands (Favareau 2007: 4).

Favareau's notion of *retooling* an intellectual enterprise without opposing or supplanting its foundations is ultimately an act of translating in the sense of Benjamin's *unlocking of the pure language in a new mode*. Similarly, Claude Lévi-Strauss (1977:4) defined translation as a change of *mode* of expression which did "not mean a different language as French, German, or the like, but to be expressed, in different words, on a different level" that is, again, a kind of retooling of an existing idea for a specific set of goals.

The writings of Thure von Uexküll are such translations of Jakob von Uexküll's ideas in German. Thure von Uexküll had a completely different intellectual armamentarium at his disposal in the 1970s and 1980s when, after being in touch with semiotic theory through Sebeok, he reframed Uexküll's *Umweltlehre* in German as well as in English (e.g. Uexküll, T. von 1980). A good example is Thure von Uexküll's quote of a passage from *Theoretische Biologie* (Uexküll, J. von 1928) that he translated into English for his contribution to Krampen *et al.*'s (1987) landmark anthology *Classics of Semiotics* in English, and also into a different *mode* for his *Kompositionslehre der Natur* (Uexküll, T. von 1980) in German, in which he presents Jakob von Uexküll's *Umweltlehre* as an undogmatic, empirical biology:

> [...] da die Tätigkeit unseres Gemüts das einzige uns unmittelbar bekannte Stück Natur ist, sind seine Gesetze die einzigen, die mit Recht den Namen Naturgesetze tragen dürfen (Jakob von Uexküll 1928:40)

> as the activity of the mind is the only aspect of nature immediately known to us, its laws are the only ones which may rightly be called laws of nature (Uexküll, T. von 1987: 149)

While the previous translation is guided by a desire for a high degree of linguistic exactitude, the following example is a good illustration of a translation that is guided by the desire to translate into

different words on a different level or 'reframe' it in terms of semiotic theory:

> Kein Subjekt kann etwas Nicht-Subjektives erkennen. — Aber wir können in den Gesetzmäßigkeiten, die unsere subjektive Umwelt beherrschen, die Regeln erfassen, nach denen etwas Über-Subjektives, die Natur, unser Subjektsein gestaltet. (Thure von Uexküll ed. 1980:52)

> No organism can have non-subjective experience. — But we can explore the sign processes of the subjective *Umwelt* of an organism and derive from them the principles by which nature [reality] produces the organism's subjective experience. (*my translation*)

Thure von Uexküll not only translated Jakob von Uexküll's early-20th-century German into late-20th-century German, but he also reframed the theoretical or philosophical core of Jakob von Uexküll's work in terms of semiotics. For a new translation of Uexküll's *Umweltlehre* the question now arises in how far the desire for a reframing of Jakob von Uexküll's biological theory in the context of biosemiotics should forfeit linguistic exactitude without distorting Uexküll's *pure language*.

For instance, the title *Streifzüge durch die Umwelten von Tieren und Menschen* (Uexküll, J. von 1934) may have found a successful mid-century reframing in the translation *A Stroll through the Worlds of Animals and Men* (Uexküll, J. von 1957), but it was in those 50 years since then that Uexküll has been reinterpreted in the context of (bio)semiotics and we may now ask the question if it is legitimate, or desirable, or even ethical to reframe this text with a translation like *Explorations into the subjective worlds of living organisms*?

Conservative thinkers may object that changing the title of a translation of a seminal text may hinder the dissemination of the existing body of work, both primary and secondary. But this is not so. The multiple English translations of Gottlob Frege's famous essay *Über Sinn und Bedeutung* (1892) are a good case in point. An important translation of this text was made in 1949 with the title *On Sense and Nominatum* by Herbert Feigl (Feigl, Sellars 1949), largely relying on the terminology of Rudolf Carnap's *Meaning and Necessity* (1947). The 1952 translation by Max Black and P. T. Geach under the title *On*

Sense and Reference relies on a new translation of key terms and a new title that signifies precisely the theoretical reframing their new translation was intended to offer. While Black and Geach's later translation is unequivocally regarded the classic text in the English canon of the philosophy of language, the Feigl translation is still considered an important landmark and is used in prominent anthologies such as Martinich's popular textbook *The Philosophy of Language* (1985). The multiple reframings of Frege's ideas have been far from an impediment to their dissemination. It may well be due to the diverse translations and reframings that Frege's ideas are still relevant beyond analytical philosophy and semantics precisely because the different readings of the original continue to fuel the international theoretical dialogue.

2. Sebeok's discovery of Uexküll's *Umweltlehre* as biosemiotics

Of course, we owe the discovery of Uexküll's work for the canon of semiotic theory to Thomas Sebeok; and his reception and interpretation of Jakob von Uexküll's *Umweltlehre* continues to inform semiotic theory in general and the biosemiotic movement in particular. But what role should his interpretation play for the task of the Uexküll translator?

Sebeok described his discovery of Uexküll in several personal essays and it is worth quoting Sebeok's personal account in full:

> I first came across von Uexküll's name in 1936, when I was still in my teens and he was to have lived for eight more years. I chanced to catch his name on the verso of the half-title page to Ogden and Richard's *The Meaning of Meaning*, the 4th edition of which I purchased when I was an undergraduate at Magdalene College in Cambridge, where Richards was Pepys Librarian at the time and with which Ogden was also associated (according to the same page), and which also listed him as the "General Editor of the International Library of Psychology Philosophy and Scientific Method." This consisted at the time already of some 85

> volumes. *Theoretical Biology* was listed as the 34th book from the top, or 52nd from the bottom. The title having caught my attention, I obtained a copy from the library, found that it was a 1926 translation of a German book published in 1920, and that it was beyond doubt over my head. Not until some thirty years later did I come to realize that this judgment was premature as well as very wide of the mark. The English translation had in fact been carried out "wretchedly...under Ogden's eccentric auspices" (Sebeok 1991b: 104). In the mid 1960s, when at last I read the authentic German version, I came to believe that Ogden, the very animator of Anglo semiotics in the 20th century, had either known little or no German or, with all his polymathic gifts, had failed to understand what *Theoretische Biologie* was really about: not biology, not psychology, not physiology, but semiotics. What's more, it unfolded a wholly unprecedented, innovative theory of signs, the scope of which was nothing less than semiosis in life processes in their entirety. It created and established the basis for a comprehensive new domain: we now call it *Biosemiotics*. (Sebeok 1998: 30)

Sebeok read the German original in 1976 and found it "if not pellucid, nonetheless electrifying" (Sebeok 1998a: 32–34). He explored Uexküll's writings in the mid 1970s and arranged for a partial publication of *Bedeutungslehre* [*Theory of Meaning*; Uexküll, J von 1982] and a new translation of *Streifzüge durch die Umwelten von Tieren und Menschen* [*A Stroll through the Worlds of Animals and Men*; 1992].

In 1977, Sebeok presented a paper entitled *Neglected figures in the history of semiotic inquiry: Jakob von Uexküll* (Sebeok 1979) at the III. *Symposium über Semiotik* in Vienna. There he connected with Thure von Uexküll and the domain of *biosemiotics* had found its principal proponents for the coming decades. Other important figures of that time were the oncologist/polymath Giorgio Prodi and the comparative psychologist Heini Hediger (cf. Sebeok 1998, 2001b) and the foundations were in place for a domain of biosemiotics that pertains to all organisms.

Thure von Uexküll's and Sebeok's meetings in Germany were later attended by the biologists Jesper Hoffmeyer and Kalevi Kull, now two of the leading figures of the biosemiotic movement. The help of those who have worked with Uexküll and Sebeok is invaluable in addressing

any fundamental questions that would arise for an Uexküll translation project. The main questions will revolve around Uexküll's terminology.

3. "Terminological issues abound" (Sebeok 2001b:37)

Sebeok attributed it to the poor translation of Uexküll's *Theoretische Biologie* (1920) that his *Umweltlehre* did not reach the Anglo-American intellectual community much earlier. Uexküll had revised his *Theoretische Biologie* during his Hamburg years and published a second edition in 1928 (reprinted in 1973 by Suhrkamp). An ambivalent review of the English translation of 1926, that was unfortunately based on the first edition, congratulated the translator on a translation "of what we know to have been very difficult German" and adds that "an unnecessary difficulty seems to be raised by the use of difficult terms" (Thomson 1927 quoted by Sebeok 2001b: 64).

In his contribution to *Classics of Semiotics*, Thure von Uexküll (1981) explained that his father understood biology as a general science of life as opposed to any narrow definition of biology; and that his terminology clearly must be understood as *general semiotics*. Jakob von Uexküll's frequent use of concepts of musicology can be seen as a desire for his work to be understood beyond the traditional boundaries of biology (cf. Stjernfelt 2001) or to align his views with those of Karl Ernst von Baer (cf. Kull 1999: 391), but it may present an impediment to those who seek a smooth integration of Uexküll's concepts with those of Peirce and Saussure. However, Thure von Uexküll insisted that the differences in Jakob von Uexküll's "terminology are not to be regarded simply as a source of difficulty; they may also prove helpful" in fleshing out where his concepts diverge from those of Peirce and Saussure (cf. Uexküll T. von 1987: 148; see also Krampen 1997: 512). This may result in such important new translations of Uexküll's work as the metaphor suggested by Thure von Uexküll of *nature as a composer listening to her own composition* (cf. Uexküll T. von 1992: 281).

Following a different trajectory, in his contribution to Marcello Barbieri's *Introduction to Biosemiotics* (Barbieri 2007), Marcel Danesi (2007: 283) proposed the neutral terminology of Modeling Systems Theory (MST) as a step towards a standard terminology that will bring semiotics in line with the biosemiotic movement, because it is not species-specific. He believes that semiotic theory has been burdened by terminological inconsistencies, especially by the use of concepts and definitions in idiosyncratic ways.

The translator may ask herself in how far is the idiosyncratic terminology essential to the pure language of Uexküll's *Umweltlehre*? And in how far is a neutral terminology conducive to the integration of general semiotics and biosemiotics? And will a neutral terminology allow biosemiotics to be the bridge between the sciences and the humanities that its current proponents intend it to be?

Sebeok referred to Whitley's *Intellectual and Social Organization of the Sciences* (Whitley 1984), pointing out that "each field has a separate communication system, that is a benchmark set of shared vocabulary items of its own that differentiates this field from all others as a sort of monopolistic exclusion device" (Sebeok 2001a: 71):

> The present terminological requirements to subsume a semiotics of culture, or just plain semiotics, under a semiotics of nature, or biosemiotics, might have been obviated decades earlier. As things are going right now, the boundaries between the two are crumbling, giving way to a unified doctrine of signs embedded in a vast, comprehensive life science. (Sebeok 2001a: 159)

Marcel Danesi considers the lack of a standard terminology one of the obvious impediments to the success of *biosemiotics* as a bridge between the sciences and the humanities. Danesi (Danesi 2007) proposed that the neutral non-species-specific terminology of MST could be the key to that successful fusion of semiotics and the biological sciences as the vast life science that Sebeok envisioned in his global semiotics (2001a).

Jakob von Uexküll's terminological choices outside of the life sciences, his musicological metaphors in particular, can be interpreted

as a way to escape the "separate communication system" of biology in the early 20th century in order to transcend the "benchmark set of shared vocabulary items" (Sebeok 2001a: 41); an approach that caused Sebeok to identify Uexküll as the most important *krypto-semiotician* of the 20th century.

The major currents in the biosemiotic movement are likewise characterized by their preferences in terminology. Marcello Barbieri demands more rigid definitions; a view that contrasts with the metaphorical eclectic use of biosemiotic concepts that can be found in the work of Jesper Hoffmeyer and, for that matter, in Uexküll's writing. In fact, the metaphorical play in Uexküll's writing and the transdisiplinarity of his objectives have been underexplored due to the lack of access to more of his work in English.

The use of concepts in innovative ways, however, can be looked at from two perspectives. One can praise the productivity of an idea for giving rise to new ideas in different contexts. "Symbol's grow" (*CP* 2.302). As far as a translator's scholarly ethics is concerned, one could say that when talking about theory, it is important to be faithful to the intended meaning and context of a theoretical concept.

The term "biosemiotics" is a good example, because its history reflects a sort of synchretizing of formerly divergent terminologies such as biohermeneutics (cf. Anton Markoš) and semantic biology (cf. Marcello Barbieri) under biosemiotics to show that what these currents have in common is greater than what divides them; and that the common future goals are more important than the historiographies of each movement.

4. A translation case study: Wittgenstein's *family resemblances* and *prototype theory*

What Wittgenstein and Uexküll have in common is the undogmatic character of their work; they were both concerned with signification, and their respective interpreters were/are responsible for the proliferation of the concepts that are the basis of the resulting theories.

Eleanor Rosch's (cf. Rosch, Mervis 1975) reframing of Wittgenstein's idea of *family resemblances* as *prototype theory* reveals a number of interesting aspects of theory translation. There are many translation problems related to prototype theory; and this will only be a brief characterization of the most obvious flaws (cf. Augustyn 2006).

First, the term "prototype" is not typically defined as an example that shares most characteristics with other members of the same category. A prototype, instead, is typically defined as a model for something that does not exist yet, a preliminary sketch or placeholder for something that is to be later. In Rosch's prototype theory, however, the idea of *family resemblances* has been used to show that categories are not defined by necessary and sufficient conditions, but by similarities (or *family resemblances*) with so-called *prototypes*. But nonetheless, prototype theory is one of the most successful theoretical frameworks in semantics, cognitive linguistics, cognitive psychology and many other fields and has yielded many interdisciplinary applications; and this may be due to no more than the trans-theoretical marketing potential of the term *prototype* and its articulation as a *theory*.

Prototype theory as a translation of Wittgenstein's *family resemblances* is a good example for what Claus Emmeche called "disciplinary promiscuity" when he wrote:

> We need periods when one discipline attacks the other; we need exchange and even theft of concepts, methods and perspectives. And to continue our sexual metaphor, we need a dose of disciplinary unfaithfulness as well, perhaps some professional mate swapping. [...] At the same time, we ought to be skeptical of any non-reflective interdisciplinary traditions. (Emmeche 1991: 176)

This idea resonates with Sebeok's dictum that "[semiotics] and, *a fortiori*, biosemiotics are, or should be, fields committed to producing novelty and innovations, not much else." (Sebeok 2001a: 39)

Wittgenstein's notion of "family resemblances" in the context of his observation on games in the *Philosophical Investigations* (Wittgenstein 1953) has been the object of such "disciplinary promiscuity" in various disciplines beyond philosophy. (cf. Wierzbicka 1990: 357;

1992: 158). In addition to a reframing this caused a sort of *shift in focus* away from the larger context: Wittgenstein's more fundamental notion of *Sprachspiel*, translated into English as *language game* has faded into the background, because the attention was redirected to Wittgenstein's analogy of *family resemblances* through its reframing as *prototype theory* and "has developed into an almost unchallengeable dogma in the current literature on meaning" (Wierzbicka 1992: 23).

In fact, the notion of "family resemblances" has become quasi-synonymous with prototype theory as one of the most successful cognitive models inaugurated by the work of Eleanor Rosch (e.g. 1973, 1975). In other words, in the particular interpretation proposed in prototype theory, the idea of *family resemblances* has been removed from the context of the *Sprachspiel*. While the famous passage on games was only an illustration of why Wittgenstein compared language to a game, the *language game*, undoubtedly, is Wittgenstein's metaphor for natural language by which he addresses *the great question* as is evident from the following quote that precedes the example of games and *family resemblances* in his *Philosophical Investigations* (Wittgenstein 1953:31):

> Here we come up against *the great question* that lies behind all these considerations. — For someone might object against me: You take the easy way out! You talk about all sorts of language-games, but have nowhere said what the essence of a language-game, *hence of language*, is: what is common to all these activities, and *what makes them into language or parts of language*. [emphasis mine]

Wittgenstein's *Sprachspiel*, much like Saussure's chess metaphor, was an intuitive analogy in search of a definition of language. The translation of Wittgenstein's original German *Spiel* as 'game' is one of those unfortunate translations that influenced the reading of Wittgenstein's work for decades. Anna Wierzbicka (1990: 358; 1992: 159) pointed to the root of the problem:

> In German, the word Spiel has a wider range of use, corresponding roughly to the English playing. [...] One feature which separates the concept of 'game' lexically encoded in English from the concept of

> 'Spiel' lexically encoded in German, is the idea of rules: of knowing beforehand what one can do and what one cannot do. Another difference has to do with the idea of a well-defined goal, which may or may not be attained. If features like these are not identified and clearly stated, cross-linguistic lexical research cannot succeed.

For example, consider the word *Kartenspiel* 'card game' on the one hand; and concepts like *Kinderspiel* 'child's play' or the adjective *spielerisch* 'playful' on the other hand. Furthermore, the verb *spielen* extends from all kinds of 'play' into 'gambling', 'acting', 'toying', 'teasing' and 'pretending' and is therefore much more complex than the English *game* may suggest, and much closer to the notion of *play* than any Wittgenstein interpreter relying on the English translation may ever suspect.

The translation of *Spiel* as 'game' in Wittgenstein's language theory has forced the exegesis of this important aspect in the wrong direction for decades. Since the publication of Wittgenstein's *Philosophical Investigations* (1953) classical philosophers have centered their efforts around proving Wittgenstein wrong about his observation on games by trying to find a feature common to all games; e.g. Khatchadourian (1957–58) suggested "serving a specific human need", or Stone (1994) "being a rule-governed activity".

In German, it would be impossible to enlist *being subject to rules* as a common feature to all things called *Spiel*. Replace *game* with *play* in English and many arguments may become irrelevant while other connections suggest themselves, such as, for instance, the affinity between Wittgenstein's *Sprachspiel* with Rene Thom's notion of *play*. (cf. Augustyn 2006)

To assess whether Eleanor Rosch should be admonished for her *disciplinary promiscuity* or *disciplinary unfaithfulness* or commended for her innovative use of Wittgenstein's notion of *family resemblances* may be a question of scholarly ethics for some, or a mere matter of taste for others. From the perspective of the translator, the whole affair could have been avoided by a better translation of Wittgenstein's *Sprachspiel*, because the *language game* unequivocally constitutes one of those non-reflective interdisciplinary traditions that even the most

talented promiscuous theorists should steer clear of. Textbooks in semantics and cognitive science might look quite different today if the language game had been translated as 'language play' and the centrality of the notion of *game* had been called into question more forcefully; and Eleanor Rosch would have had to promote her prototype theory without the endorsement of Wittgenstein's *Philosophical Investigations.*

The Wittgenstein/Rosch case study shows that (1) a particular translation of a theoretical concept — even an inaccurate one from a linguistic perspective — can influence the way scholarly communities look at a an entire body of work and what part of it they focus on; (2) a successful reframing can move a theoretical concept beyond the disciplinary boundaries in which it was originally articulated; and (3) if the reframing fits into an existing body of work it can be articulated as a precursor to a set of ideas that developed much later in a very different context and strengthen its theoretical focus with a new terminology.

For the translation of Uexküll's *Umweltlehre*, a successful reframing can make the difference between (1) an interpretation of Uexküll as an eccentric biologist, important semiotic theorist of the 20th century, or foundational theorist of 21st century biosemiotics; (2) it can remain within a semiotics of nature, the disciplinary boundaries of biology or articulate itself as the "unified doctrine of signs embedded in a vast, comprehensive life science" (Sebeok 2001a: 159) that includes culture; and (3) a new terminology may align the reframing of *Umweltlehre* with existing theoretical frameworks that are valued by different scholarly communities (e.g. Peircean semeiotic and MST).

5. Avoiding the 'Guru effect'

Jesper Hoffmeyer identified another important aspect the Uexküll translator has to take into consideration (Hoffmeyer 2004: 74):

> Will the veneration one feels for the pioneer tend to bias critical enquiry? Will the modern perspective, in this case biosemiotics, tend to bias our evaluation of work done nearly a hundred years ago? And will the "Uexküllian" perspective [...] tend to blind us from such areas in the field where a modern approach may require a paradigmatic distance from the old master?

What Hoffmeyer proceeds to do is exactly this: by translating the Uexküllian concept of *Planmäßigkeit* and combining it with the Peircean notion of *habit-taking*, he arrives at an understanding of causality in nature that is at the heart of biosemiotics. This teleological principle that is expressed in Uexküll's *Umweltlehre* and Peircean semiotics is expressed in new terms as *indeterminacy* or *interpretation* in nature as in culture. By mapping the Uexküllian concept onto the Peircean concepts, the translator may be tempted to take certain notions as equivalent even though they were not proposed as such. Reframing Uexküll to fit the concepts of MST amounts to the same decontextualizing of 20th century work in order to bring it into the 21st century. Recall Don Favareau's reframing of Aristotle. The Guru effect affects the translator precisely when she cannot resist the temptation to endow the material she translates with the modern perspective that lacks the proper amount of *paradigmatic distance from the old master*.

6. Towards a glossary of Uexküll's biosemiotics

Sebeok was convinced that "this is why Jakob's seemingly arcane terminology [...] is so advantageous, even when — or especially because — it provokes an often-felt need to have recourse to an accompanying formal glossary" (Sebeok 2001a: 41). But what exactly should such a glossary look like? In his collection *Kompositionslehre der Natur*, Thure von Uexküll (1980) included a glossary that may be a useful starting point. Thure von Uexküll's glossary relies heavily on definitions from Jakob von Uexküll's own work; should these be the foundation of a *Glossary of Uexküll's Biosemiotics* for the 21st century? Which terms should be naturalized into English? What role should the

terminologies of Pericean semeiotic and MST play? Should it include all extant translations? Should the focus be on the origin of each term in Uexküll's *Umweltlehre* or on their interpretation in biosemiotics? Should it follow a simple dictionary format or include encyclopedic information on each term? Should it be aimed at an uninitiated reader of biosemiotics or an expert?

The Glossary of Uexküll's Biosemiotics will certainly alleviate the task of the Uexküll translator of integrating Uexküll's own terminology in order to place his work firmly into the (bio)semiotic canon in English. The translator's current perspective, in this case biosemiotics, will unequivocally "bias [her] evaluation of work done nearly a hundred years ago" (Hoffmeyer 2004: 74) and thereby influence the terminological choices. Striking a balance between arcane and neutral terminology, sacrificing just enough linguistic exactitude to successfully reframe Uexküll in terms of biosemiotics are precisely the challenges of getting to the philosophical and theoretical core of Uexküll's *Umweltlehre* in our time.

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Как переводить Якоба фон Юкскюлла: включение Umweltlehre в рамки биосемиотики

По мнению Томаса Себеока именно «никуда не годный» перевод «Теоретической биологии» Юкскюлла (1920) виноват в том, что понятие Умвельта не закрепилось в англоязычном мире. Без сомнения, доступ к трудам Юкскюлла на английском языке не только развил бы биосемиотику, но и заполнил лакуну в основном каноне семиотической теории. Цель данной статьи — рассмотреть проблемы терминологии и теории перевода в связи с Юкскюлловскими разработками теории Умвельта и биосемиотикой.

Jakob von Uexkülli tõlkimisest — *Umweltlehre* toomine biosemiootikasse

Thomas Sebeoki meelest oli Uexkülli *Teoreetilise bioloogia* (1920) "hädine tõlge" süüdi selles, et 'omailma' (*Umwelt*) mõiste ei jõudnud angloameerika intellektuaalsetesse ringkondadesse varem. Ei ole kahtlustki, et Uexkülli omailma-uuringute kättesaadavuse paranemine inglise keeles ei edendaks mitte ainult biosemiootikat, vaid täidaks ka tühimiku semiootilise teooria põhikaanonis. Käesoleva artikli eesmärk on käsitleda terminoloogiaprobleeme ning tõlketeooriat seoses Uexkülli omailma-uuringute ja biosemiootikaga.

Sign Systems Studies 37(1/2), 2009

Mutual understanding and misunderstanding in biological systems mediated by self-representational meaning of organisms

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Abstract. Modern biology gives many casuistic descriptions of mutual informational interconnections between organisms. Semiotic and hermeneutic processes in biosphere require a set of "sentient" community of players who optimize their living strategies to be able to stay in game. Perceptible surfaces of the animals, semantic organs, represent a special communicative interface that serves as an organ of self-representation of organic inwardness. This means that the innermost dimensions and potentialities of an organism may enter the senses of other living being when effectively expressed on the outermost surfaces of the former and meaningfully interpreted by the later. Moreover, semantic organs do not exist as objectively describable entities. They are always born via interpretative act and their actual form depends on both the potentialities of body plan of a bearer and the species-specific interpretation of a receiver. As such the semantic organs represent an important part of biological reality and thus deserve to be contextualized within existing comparative vocabulary. Here we argue that the study of the organic *self-representation* has a key importance for deeper insight into the evolution of communicative coupling among living beings.

1. Three models in biosemiotics

The key word of our title is *mutual*; we maintain that for genuine biosemiotics it is necessary to develop a model of a biosphere of communicating semiotic entities. To highlight the task, we shortly describe three competing models, each in some context being labelled as "semiotic" by different authors (the boundaries between them being not clear-cut).

1) At the level of *organic codes* (*sensu* Barbieri 2003) the task is a reliable translation from one coding system into another, according to a given (and finite) coding table. Hence, what is given beyond the physical system are rules obeyed by either a sentient being, or by a *hardware* of a sort. It follows that at this level, the quasi-semiotic process does *not* require understanding, and no meaning is being extracted during the process. Examples of this level are: genetic code, signalling cascades, perhaps also the bacterial biosphere. Here belong all cybernetic networks.

2) The second level concerns the understanding of signs in one's umwelt. The being (animal) recognizes signs (*Merkmale*) in its environment and behaves accordingly. The paradigmatic example is the oak tree as given by Jakob von Uexküll (1956 — Fig. 1)

Figure 1. An example of different interpretations of the same object "oak tree" in the umwelt of a forester and a scared girl. After Uexküll 1956.

The tree is perceived differently in various umwelten of different living beings (the forester, the girl, an occasional tramp, the insect inhabitants of the tree, etc.). The tree, however, has no say in *how* it will be present in those umwelten. It is passive in relation to them as, say, is a stone or a cloud. More precisely: as a stone or a cloud, it also can evoke meanings for all those beings, but without manifesting any interest from its side, neither investing any effort from its side to signify something.

3) Finally, there is a level of sharing the common space and mutually and deliberately influencing other players of the game, by recognizing them *as* possible receivers of the message. Here belongs the concept of the *biosphere* as developed by S. Kauffman (2000), but above all, the concept of being-together (*Mitsein*) of Martin Heidegger (1995) as well as self-representation (*Selbstdarstellung*) by Adolf Portmann (1960b). Here, all living beings communicate *actively* with their cohabitants in the environment, and can display the whole scale of interactions, like orders, cheating, mutual warning, quorum sensing, mimicry, etc. What living beings communicate here is presentation and perception of likeness, i.e. gestalt of *some* cues by which the being gives itself to others, and the others will recognize it as such. We maintain that deep understanding of one's partner(s) is a prerequisite of such phenomena. Here, we shall concentrate on this level of communicating meaning.

2. Self-representation

Adolf Portmann suggested that the visible surfaces of the living organisms represent a new kind of organs: organs that perform the self-representation of the inwardness of organisms and interactions among organisms:

> Such a surface is not merely a 'border', not just a barrier for the containment of an inner milieu or for the safeguarding of metabolism, that is, for mechanical protection. No. This surface becomes an organ with entirely new potentialities. [...] The surface display is a part of presentation of self of a living being. (Portmann 1990: 25)

Going along with this, the expression of pigment patterns and integument ornaments on the outermost surfaces are conceived as the non-random and active achievement of a specific kind or lineage of organism. These, often intricately patterned organismal surfaces, bear a semantic role, and despite its superficial nature they are as important as other biologically adaptive structures. In the following text, we introduce the different types of outermost organization developed by living beings with special attention to the importance of surface ornaments of organisms for the mutual interplay between and within various life forms. Our subject here is constricted mainly to the instances that may enter the sight of a receiver (optic channel), but a similar way of reasoning may be easily extended also to other forms of perception as chemical, electrical, acoustic, tactile etc.

Various shapes, patterns and colorations have evolved due to the possibility of being perceived by the other part, being recognized as a sign and interpreted within a specific context. In respect to this, appearances of different life forms may be divided into those having a primarily signalling role and those not having any signalling role, or they have gained such a role secondarily. For a good example of the latter consider the semi-transparent bodies of embryos or those of adult animals inhabiting the environments where the visual perception is confined or disabled (e.g. troglobionts, pedobionts). It is highly probable that the evolutionary transition from non-specific semi-transparent bodies to sophistically structured opaque surfaces (or conversely to full transparency), like pigment patterns, physical colorations, and integumental ornaments covariates with the evolutionary appearance of sight. This was an important evolutionary event that led to the increase of communicative abilities among organisms, in which the life got its face.

In Portmannian perspective, an aptitude for mutual understanding sprouts from the very accent on selfhood of every individual living being. The importance of this self-relation is manifested by the vital processes of self-construction, self-maintenance, self-identification and, definitely, *self-representation*. Perhaps these features characterize every living being, and just these are lacking in inanimate nature. *Self-*

representation of the inwardness of an organism, i.e. active presentation of the self, in which the very innermost is expressed via the very outermost, represents the keystone of Portmann's biological thought. This was aptly expressed R. B. Carter in his interpretative essay upon Portmann's writings: "Thus whereas Galileo said, 'Nature likes to hide', Portmann saw that nature likes reveal, but that very revelation quite often hides precisely what it is which makes that revelation!" (Carter 1990: 268).

Basically, the mutual understanding among organisms depends on what is exposed, and thereby unproblematically perceivable, as well as on something deeply inner what cannot be unveiled in any simple way. In this sense, every mutual understanding is mediated, on the one hand via externalization of inwardness in a process of self-representation, on the other hand via internalization of signals that fit meaningfully in the inwardness of a receiver; not quite dissimilar from empathy. The inwardness can never be fully discovered by the researcher. However, it may be partially approached by the study of outermost expressions of organisms such as specifically featured appearances emerged in the process of self-representation. Therefore the only way to understand the innermost is to analyse the outermost. Portmann's concept of inwardness (*Innerlichkeit*) may rightly resemble the Uexküll's term *Umwelt*; both of these concepts stand for *self-experience* of an organism, i.e. for something what cannot be directly approached by a human observer. The realm of self-experience of organisms was considered by both Uexküll and Portmann as the most prominent target area of their biological research.

3. Organs of self-representation (semantic organs; semes)

When we conceive visible surfaces of organism to be *organs of self-representation* it allows us to speak about these entities in the terms of homology and analogy. These two terms are crucial for every statement in comparative biology which deals with some parts of greater

wholes, such as body parts, organs or even sequences (Ghiselin 2005). Therefore, to conceptualize the *organs of self-representation* within the context of analogy and homology may help us understand the manifold diversity of organic surfaces in biological terms such as function, form, organization, phylogeny etc. Such a biological explanation is very important but still insufficient for the full understanding of these organs of self-representational meaning because their nature is not objective but interpretative. These organs are always dependent on the aptitude of the perceptual world (umwelt) of a receiver.

In spite of all this, if we want to introduce these semantic organs to the comparative terms of homology and analogy we should first specify what we exactly mean by these semantic "organs". In general, when we want to subject something to comparison, we should first know what it is to be compared. Therefore, some kind of definition of these *semantic organs of self-representation* is needed. But how these entities can be compared and even defined when we have already said that their performance may change according to the perceptual aptitudes of an interpreter? It is certainly an uneasy task because any rushed definition attempt may potentially lead to an inappropriate objectification. In what follows, we shall establish a preliminary definition of semantic organs in animals, using the optical examples, i.e. the semantic organs perceived by the visual interpreter.

Animal surfaces represent additional organs or rather organ systems *as real as* the other organs or organ systems such as liver, lungs, pancreas, nervous system etc. This does not mean, however, that the properties of the inner anatomical and molecular constitution of an organism have no effect on its external display. Semantic organs are visible motifs of animal display that are partially dependent on both outer (skin, coat) and inner (skeleton, muscles) constitution of a body. As Portmann (1960a: 222) has aptly shown, also the colour of inner organ systems such as blood vessels and molecular qualities of haemoglobin (redness) may contribute to the external appearance of an animal. The organs of visible surfaces are rather co-structured by various constituents in the same way as the lungs, for example, are interlaced with nerves, blood vessels, integuments etc.

Semantic organs of visible surfaces function meaningfully if interpreted by the seeing eyes of an interpreter. We have already proposed to call such *semantic* organs of visible surfaces abbreviated as *semes* (Kleisner and Markoš 2005). Semes do not represent only the property of a specific morphological arrangement of certain species, but rather they arise in the process of interpretation by being watched by a second part. Semes are coming into being during an interpretative act, so they are generated and specified in dependence on the umwelt of an interpreter. Lastly, semes are shaped within the umwelt of an animal where they are recognized as existent and potentially meaningful. In summary, *semes* as organs of visible (or anyhow perceptible) organic surfaces are, on the one hand, physically anchored in the inherited organization of the body of a living being, but on the other hand, their high profile is achieved in the act of interpretation within the umwelt of an "seeing" organism.

4. Mimicry and homosemiosis

If self-representation is considered as a genuine and important character of living beings, then acquiring, modification, or loss of species-specific appearance means something non-trivial because these changes in the very outermost level inform us about the changed inwardness of an organism. For example, take numerous cases of mimicry where the appearance (and often also behaviour) of a model is imitated by one or more mimic species. In the case of Batesian mimicry, the model is somehow protected (unapalatability, hurtful weapons, poison etc.), whereas the mimics are usually lacking any protection. It is apparent that mimic organisms gain a selective advantage by adopting *semes* of a model. In this respect, we can talk about a kind of *semetic parasitism*. But this bright advantage in survival is necessarily connected with a less apparent disadvantage in the terms of *self-representation*. That is the loss of species specific *semes* what makes a payment for reproductional success. The self-representation of mimics does not longer stand for the *presentation of*

the self, but it is the presentation of the *semes of a model* on the body of the mimic. In other words, bodies of the mimics serve as a projecting screen for the semes of the model. So, in fact, the display of a mimic represents the "self"- representation of the model.

The signalling role of a particular organismal display (wasp-like pattern, for instance) influences not only the receivers, but also the bearer of such a warning sign is often "aware" about its aposematic vestment; irrespective of the fact as to whether we are talking about the model (wasp) or the mimic (fake wasp) such as various hoverflies, clearwing moths (*Sesia*), longhorn beetles (*Clytus, Plagionotus, Strangalia*) etc (Fig. 2).

Figure 2. Two unrelated species of insects with homosemiotic "wasp-like" pattern. Left: Longhorn beetle *Strangalia maculata* (Central Europe); Right: Grasshopper *Phymateus saxosus* (East Africa)

The generation and use of warning coloration presupposes a certain kind "pre-understanding" by the bearer of the perceptual faculties (umwelt) of the signal receiver. A trained human researcher is able to distinguish model organisms from their non-allied imitators. He will also mark, for instance, the black and yellow pattern on the wing-cases of long horn beetles as analogous (nonhomologous) to the seemingly same pattern on the abdomen of the wasp — because of different phylogenetic and developmental origin of both patterns, despite all superficial similarity and congruence of warning function. Never-

theless, it does not matter whether the wasp is really a real wasp from genus *Vespulla*, for instance, or an imitator from whatever group. It is important that both the real wasp and the fake wasp are interpreted as the same animal or the animal having the same meaning for a receiver (predator). In turn, a mimic relies on the fact that its appearance and behaviour will be interpreted by the receiver as enough wasp-like as necessary to avoid predation.

We cannot say much about the inner character of this reliance, but there is a lot of evidence that, for example, the aposematically coloured animals have different modes of behaviour in comparison with the cryptic ones (see, for example, Maran 2007, Wickler 1968). We propose the term *homosemiosis* for situations when signals (*semes*) emitted by model and mimic organisms are taken as the same in the perceptual world (umwelt) of a receiver. Homosemiotic organs are neither analogous nor homologous. Analogy means the correspondence in function (and similarity), but analogous organs are conceived as different organs (nonhomologous). Homology is the ontological sameness; homologous organs are the same organs because they are theoretically traceable to their precursor present in the immediate common ancestor, irrespective of the function and similarity. However, organs are homosemiotic, irrespective of the fact that they are analogues or homologoues in the eyes of a human biologist, because they are recognized as the same organs in umwelt of the interpreting organism.

5. Conclusion remarks

The self-representation of organisms is the generator of semblances (semes) that play an important role in the evolution of communicative coupling among and within species. Based on the presented discussion, we propose adding a biosemiotic perspective to the comparative biological terminology by introducing a new term *homosemiosis* (from Greek '*homos*' = 'same', '*semeion*' = 'sign'); marking the phenomena where congruence of meaning appears (Kleisner 2008). The terms

analogy, homology and homosemiosis can be defined in the following way:

(1) *Analogy*: correspondence of different organs having the same function or being superficially similar.

(2) *Homology*: correspondence (sameness) of organs that are inherited from their precursor, present in the most recent common ancestor.

(3) *Homosemiosis*: correspondence of organs that are interpreted as the *same* organs in the umwelt of a particular organism or group of organisms under investigation (irrespective of the developmental and phylogenetic origin of the organ).[1]

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[1] *Acknowledgements.* This work has been supported by the Research Program CTS MSM 0021620845 and the GPSS Major Awards Program, a joint program of the Interdisciplinary University of Paris and Elon University.

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Взаимное (не)понимание в биологических системах на основе саморепрезентации организмов

Современная биология предлагает несколько рафинированных описаний информационных связей между организмами. Семиотические и герменевтические процессы в биосфере предполагают существование сообщества «чувствительных» членов, которые оптимизируют свои жизненные стратегии, чтобы остаться в игре. Перцептивные поверхности животных, семантические органы составляют специальный коммуникативный интерфейс, который действует как орган репрезентации органической внутренности организма. Это означает, что глубинные уровни и потенциалы организма доступны органам восприятия других живых существ в том случае, если внешние поверхности организма успешно их демонстрируют, и если принимающий организм интерпретирует их как значимые. При этом семантические органы существуют в качестве объективно описываемых. Они возникают всегда в ходе интерпретации, и их реальная форма зависит как от возможностей телесного плана носителя, так и от видоспецифической интерпретации принимающего. В таком виде семантические органы составляют существенную область биологической реальности и достойны вовлечения в сферу современной терминологии. В статье утверждается, что изучение саморепрезентации организмов имеет ключевое значение при глубинном понимании эволюции коммуникативных связей между живыми организмами.

Vastastikune mõistmine ja vääritimõistmine bioloogilistes süsteemides organismide enese-esituslike tähenduste vahendusel

Nüüdisaegne bioloogia pakub organismidevaheliste informatsiooniliste suhete kohta mitmeid rafineeritud kirjeldusi. Semiootilised ja hermeneutilised protsessid biosfääris eeldavad "tundlike" osaliste kogukonna olemasolu, kes optimiseerivad oma elustrateegiaid, et mängus püsida. Loomade tajutavad pinnad, semantilised organid, moodustavad spetsiaalse kommunikatiivse liidese, mis toimib organismi orgaanilist sisemust representeeriva organina. See tähendab, et organismi kõige sisemised dimensioonid ja potentsiaalid võivad jõuda teiste elusolendite meeleelunditesse, juhul kui organismi välimised pinnad esitavad neid tulemuslikult ja kui ka vastuvõtja interpreteerib neid tähenduslikult. Seejuures eksisteerivad semantilised organid objektiivselt kirjeldatavate nähtustena. Nad tekivad alati interpretatsiooni käigus ja nende tegelik vorm sõltub nii kandja kehaplaani võimalustest kui vastuvõtja liigispetsiifilisest interpretatsioonist. Säärastena moodustavad semantilised organid olulise osa bioloogilisest reaalsusest ning väärivad seostamist nüüdisaegse terminoloogiaga. Käesolevas artiklis väidame me, et organismide *enese-esituse* uurimine on võtmetähtsusega, et mõista sügavuti elusolendite kommunikatiivsete seosepaaride evolutsiooni.

A biosemiotic conversation: Between physics and semiotics

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Abstract. In this dialogue, we discuss the contrast between inexorable physical laws and the semiotic freedom of life. We agree that material and symbolic structures require complementary descriptions, as do the many hierarchical levels of their organizations. We try to clarify our concepts of laws, constraints, rules, symbols, memory, interpreters, and semiotic control. We briefly describe our different personal backgrounds that led us to a biosemiotic approach, and we speculate on the future directions of biosemiotics.

We have started this conversation standing at the base of Massachusetts' highest mountain. The forest on the top was hidden from our sight by clouds. We talked on several biosemiotic themes, which we develop further here; but where they lead us is unpredictable. That is life.

1. The regions for life in the physical world

K. The first problem we need to solve is evidently to demonstrate how the possibility of *choosing one's path* — a characteristic feature of all life — *can be embedded into the picture of physical world* which is based on inexorable physical laws. Everything in the world (at least

that can be measured) is consistent with physical laws. Yet there is what you have characterized as *open-ended evolution*.[1] Would you agree if we call it — equivalently — as a *freedom to establish new rules*?

H. Yes, it would certainly include establishing new rules, but by *open-ended* I want to include *any* emergent structure, function or behavior that can be imagined — or perhaps even behavior that we can't imagine because of the limitations of our current brains. We can't predict what novelties evolution might produce.

K. The open-ended evolution includes then two distinct properties. (1) an immense[2] number of potential forms, and (2) a basic unpredictability of the paths evolution will take. These features, accordingly, apply to biological evolution and do not apply to the evolution in non-living world.

H. The physical basis of the immense number of forms is a consequence of the immense number of linear sequences of material units that laws cannot distinguish because of their similar energy or similar stability. This is the genetic memory. Only some form of "frozen accident" or higher level selection process affects which memory sequences survive over time. Not only are the initial sequences unpredictable, but their physical structure appears to be largely arbitrary. Natural selection is also unpredictable because of its complexity and the indefinite time period over which selection continues to work.

The most obvious, and I would say the most important, similarities of genetic language and human natural, formal, and computer languages is their expression by such discrete, linear strings using only a small, materially arbitrary alphabet. It is just these properties that allow simple and reliable writing, reading, and storage in a memory

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1 For example, Pattee 1988: 69.

2 With this term I would refer to Walter Elsasser (1998: 49ff) who has emphasized the role of immenseness in this sense as a characteristic feature of life.

that is lawfully undetermined, and that allows practically unlimited information capacity.

K. The consistency with physical laws means that everything is *dependent* on the laws — none of biological or mental processes is inconsistent with any physical law. However, as you say, this does not mean that everything is *determined* by the laws.[3] The "regions of indeterminacy" are supposedly those in which life can establish itself and evolve. Is it possible to describe these regions of indeterminacy and how they arise?

H. The inexorable character of physical law is often misunderstood to imply determinism. This is not the case. There are innumerable structures in the universe that physical laws do not determine. It is also important to understand why *lawfully indeterminate* does not mean *physically indistinguishable.*

Since all the basic laws of physics are expressed in terms of energy, systems with two or more states with the same energy are lawfully indeterminate. However, in many cases we can distinguish these states by measurements of their initial conditions. These law-equivalent states are often called degeneracies or symmetries.

A common example is chirality, or left and right handedness. Chemically, amino acids and proteins can be left or right handed, and they cannot be distinguished by the laws that they both obey. Nevertheless, most types of biochemicals in living organisms must stick with one or the other.

This is like our driving on one side of the road. Either side would work just as well as the other, but we have to choose one for traffic to function efficiently. Such symmetry-breaking events that persist for structural, functional, or selective reasons are appropriately called "frozen accidents".

The most important energy-degenerate structures for life and language are the linear strings of discrete units like nucleic acids and

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[3] Pattee 2008: 151.

the strings of symbols like the words on this page that form a memory. It is just because of the immense numbers of these energy-indeterminate but structurally distinguishable strings of symbols that their information storage capacity is open-ended. These distinguishable sequences and the information they contain are not determined or restricted by natural laws; but their relative permanence is the result of frozen accidents, and natural or cultural selection in specific environments. Most linguistic conventions are probably frozen accidents. It is possible that the genetic code and consequently life itself began as a broken symmetry that became a frozen accident.

K. Isn't *redundancy* a more precise term than degeneracy in these cases?

H. The word "degeneracy" is physical jargon that is not equivalent to "redundancy". More precisely, linear copolymers are "near-degeneracies" meaning that their stabilities or lifetimes are nearly the same as long as they remain linear and isolated. So far this is just a "meaningless" physical necessity that allows an unlimited variety of sequences.

Degeneracy is more closely related to what physicists call a symmetry where any change of sequence order does not change the law-based description. Degeneracy has nothing to do yet with semiotics or potential functions where "redundancy" may have meaning.

K. Still, it seems to me, we have not yet entirely explained how the living systems — or sign processes — escape from the determinism of the physical laws. Because the existence of energetically degenerate states yet does not mean that what will happen will not be determined by the initial conditions — as for instance in case of a growth of a nucleotide strain, the choice of the next nucleotide is not determined by the previous nucleotide, however it can be determined by a movement of the nucleotides around (e.g., the one that will reach the endpoint of the strain first would stay there).

In other words, in order to explain the appearance of semiotic freedom[4] the existence of law-equivalent events is necessary, but this cannot be achieved on solely molecular level. It is necessary to demonstrate the emergence of non-determined regulation by boundary conditions. Otherwise the freedom is basically illusionary, as for instance Daniel Dennett would claim.

H. The concept of absolute determinism as envisioned by Laplace and philosophers like Dennett, has turned out in physics to be an unsupportable and unproductive way of thinking. Determinism is an untestable metaphysical concept. First of all, measurement processes are irreversible and therefore dissipative and subject to error, so determinism is not empirically verifiable. All the fundamental laws are consistent only with a probabilistic universe. We have enough "freedom" just because of the undeterminable or equivalent probabilities of many structures, like polymer sequences.

There is also plenty of freedom just at this molecular level to allow brains to make choices because all brain function is dependent on the molecular level. As Arthur Eddington (1929: 260) noted long ago: "There is nothing to prevent the assemblage of atoms constituting a brain from being of itself a thinking object [with "free will"] in virtue of that nature which physics leaves undetermined and undeterminable".

K. You have used the term *constraint* as a central notion in your writings. How should constraint be defined?

H. In physics a constraint is a local structure that limits the motions of otherwise "free" particles that are governed only by the laws of motion. However, the concept of constraint is also used to describe levels of hierarchical organizations. Generally speaking, each higher level requires a constraint that is described by fewer observables than the

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[4] The concept of semiotic freedom is central to Jesper Hoffmeyer's writings (for example, Hoffmeyer 2008).

lower level description. More precisely, a constraint is an *alternative simplified description* of structures that are not usefully described by the behavior at a more detailed lower level.

A simple example is a closed box that limits the detailed motions of the gas molecules inside. The box itself is also made of molecules, but they are constrained by chemical bonds to form a solid structure. So we simplify the description of the box by describing only its geometric boundaries, and we ignore the detailed molecular structure of the box itself. Such constraints are also called "boundary conditions".

A more complicated example is an internal combustion engine. The entire engine is made of molecules, but they are so rigidly constrained as solid parts that we can usefully describe the engine's motion by just one rotational degree of freedom. Engines constrain the gas molecules in the cylinders so that, by coupling to several higher levels of fixed and moving constraints, it does useful work.

A very complicated example is the computer that at the lowest level simply constrains the flow of electrons. At a higher design level these constraints are described as circuits, memories and gates. However, when we use a computer we ignore this hardware level of constraint because it is more practical to control its behavior at a higher level of *symbolic constraint* we call a code or program. A reasonably complete understanding of a modern computer requires different descriptions and languages for at least six levels of constraints.

Biosemiotics covers even more levels of constraints, from the chemical bonds that constrain gene sequences, enzyme dynamics, and cell membranes, to the matter-symbol transition of the structural genes and the epigenetic controls of development, and finally to the nervous system architecture and the brain. Consequently our biosemiotic models require many different levels of descriptions. Failure to recognize that these different levels of descriptions are necessary and *complementary* often causes useless arguments over which is the "best" description.

By contrast with the computer, the organism itself must develop almost all of its higher level constraint structures under the supervision of the genetic description. The genetic constraints harness the

self-organizing physical laws with great efficiency, like protein folding and the self-assembly of components, all of which follow energy dependent laws. In other words, a relatively few genetic constraints control a large number of energy-based physical actions and constructions. As we now are learning from gene sequencing, the simple structural genes are only a small fraction of the genome. Most of the genome is made up of control sequences that are coordinated by extremely complex linkages. How this coordination arises is the key problem of evolution and development (Pattee 1971a).

K. Thus, there are constraints both in the non-living and the living world. But aren't these constraints radically different? As we can observe, the constraints in the living world are, (a) fundamentally individual, due to the individuality of each organism, and (b) mutual or reciprocal, due to the communication processes that occur between any living beings, between the cells, and between the organisms. As a result of the individual and mutual constraints, the relations become established between the living systems — the relations (I would see these also as rules, or codes) that might be unpredictable from the physical laws.

H. Yes, living and nonliving constraints are radically different for the reasons you give. Nonliving constraints are not constructed from heritable memory that persists by natural selection. Living constraints occur in individuals with a memory. Genes are the memory that define the individual. As Hippocrates recognized, your conscious individual self is memory in your brain. All your other organs can be transplanted without changing your individual awareness. The same is true of the genes at the cellular level.

K. A living system can establish constraints and do work in this way. Via doing work, it can then build whichever structures, both useful and just for fun, or also in a "let's see what comes out of it" way. The work done with the help of constraints is all using physical processes, which means that no freedom from the laws, no indeterminacy is

really required for this part of the life process. The freedom from laws (in the sense of law-equivalence, or indeterminacy), however, as it seems, is necessary in order to make choices, i.e. to behave in a way that would not be predictable by any computational means.

H. To be more precise, you never have "freedom from laws" but only freedom of initial or boundary conditions. You have to make a clear distinction between laws and constraints. Laws are universal and inexorable. Nothing is free of laws. Constraints are local structures that obey laws but are not determined or predictable by laws. Memory is a special type of constraint that can alter or control the lawful course of local events. Polanyi's (1968) phrase "harnessing the laws" is apt.

It is only memory constraints that allow an organism's heritability, variation and natural selection. At the cognitive level, it is only by consulting our memory that we feel we are making choices. A sudden response to a stimulus, like a loud noise, does not feel like a choice.

K. Nevertheless, we may probably think of common free behaviour also without any inclusion of law-equivalent states. For instance, if a behavioural act is a habit-based search for an object represented by its memory, driven by an organism's need and taking into account the umwelt around — it is not obvious that any law-equivalent state is required for such a behaviour.

H. Exactly. It is just because it is law-equivalent that that law-based thinking is irrelevant. Semiotic expression is free of physical laws. The existence of any memory requires many law-equivalent states. In fact, the information capacity of a memory is defined in terms of the number of law-equivalent (equiprobable) states.

K. A behavioural act may result in some learning, which means a slight change of memory, and thus the behaviour will be fully individual, and also unpredictable, because the response cannot be calculated — exactly analogically to the complete function of an enzyme that also cannot be calculated. Thus, a question still is:

whether a complex individuality is not already sufficient to provide all behaviours the organisms may have?

H. Again I would say that any "complex individuality" is defined only by its memory, and therefore such memory-controlled individuals would be capable of evolving or learning many forms of behavior.

K. A particular constraint can be produced deterministically, like the shores of a river as the river is shaping them. But if there is a system of constraints, in which the constraints mutually rebuild each other, whereas the reproduction of the constraints is based on a non-exact mutual recognition, then an identity can arise, which turns out to be quite independent from microprocesses.

For instance, in a population of biparentally reproducing organisms each individual is genetically different from any other, but they recognise each other when producing offspring and thus form a species that holds itself.

This is like an ongoing communication, in which the communicants reciprocally constrain each other and thus the self-identity of the communication process is kept. Life is probably just this kind of general communication process.

In order to get life running, what is required is an inheritance mechanism, i.e. memory — the one that consumes energy in order to rebuild itself; the inheritance mechanism[5] obviously has to include semiosis, because it has to find and recognise its building blocks. And the inheritance mechanism is nothing else than a general self-supporting communication mechanism, as I just tried to describe it.

H. I would agree that even the simplest reproduction requires the communication of information from parent to offspring. All multicellular development is also dependent on communication between

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[5] Inheritance is meant here in a broad sense, like, for instance, Jablonka and Lamb (2005), who include into it the epigenetic, genetic, behavioural, and symbolic inheritance.

cells. I would still argue that some form of memory, not necessarily discrete symbol strings, is the source of all heritable information. Where would a semiotician say symbols are located when not in use?

K. That's right. Where memory, of course, is not just a structure but a correspondence (i.e., a *relation* between structures) that is modified and conveyed in semiosis.

Thus biosemiotics is the field that not only tackles the mind-matter problem, but also addresses the problem of complementarity of semiotic and physical descriptions at all levels. There is a whole series of problems of the "symbol-matter" type that you have listed in your writings. Can you describe these?

H. The amazing property of symbols is their ability to control the lawful behavior of matter, while the laws, on the other hand, do not exert control over the symbols or their coded references. It is just for this reason that evolution can construct endless varieties of species and the brain can learn and create endless varieties of models of the world. That is why organisms and symbol systems in some sense locally appear to escape the global behavior of physical laws, yet without ever disobeying them. Fully understanding this power of symbols over matter at *all* evolutionary levels is what I call "the symbol-matter problem".

The four most notorious symbol-matter levels are the genetic code in biology, pattern recognition and sensorimotor control in nervous systems, the measurement and control problem in physics, and the mind-body problem in philosophy.

K. It occurs to me that any true model of semiosis has to include in itself the "symbol-matter problem" as you call it. The models of sign that don't include it may be useful in certain cases, but in order to be a model of semiosis, i.e. of sign process, the inclusion of symbol-matter problem is inescapable.

H. I think the "symbol-matter problem" is maybe not the best name because it is a triadic relation. The symbol and matter must be connected by an intepreter (Peirce's "system of interpretance"). Following the physicists' use of "cut" to separate the measurement from what is measured, I have also called the necessary separation of symbol and referent the "epistemic cut" which is also a triadic relation that must comprise the interpreter.

Both these phrases appear to evade the problem because symbol, matter, and cut are relatively simple to describe compared to what is necessary to describe for an actual measurement process or any system of interpretance. I have said, along with most biosemioticians, that *the simplest system of interpretance is the living cell* (Pattee 1969). I have also suggested that the enzyme constitutes the simplest functional measuring device (Pattee 1971b). Only if the enzyme recognizes (measures) its substrate by binding does it function as a specific catalyst. Furthermore, the relation between its substrate recognition and its catalytic function is not determined by laws but only by virtue of its genetic construction.

K. I think we need a special term to mark the connections or structures that are made specifically by semiosis, i.e. via a semiotic control. These are the pieces of semiosis "left behind", the fractions that are produced as parts of relations or codes, or of memory. In the cultural sphere, these are usually called 'artefacts', but as far as I know there is no general term for this in biology or in physics.[6] These are the structures made when using the physical indeterminacy — like the proteins that are built by ribozymes, or the nests built by birds. Most of the living matter (as chemical structures) is such, and also what remains

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[6] Except a proposal made by M. Barbieri who proposes simply to extend the term 'artefact' over the everything made (or manufactured) by life. Another, but different approach is developed by J. Deely, who is extending the term 'object' to anything what is either recognised or produced; since, however, the objects are (as Deely argues) always a part of the action of signs, this leads him as a result to extend the semiosis to occur in the non-living world.

after an organism has died, so most of the material in ecosystems belongs to this, because it is made via semiotic control.

What is interesting with these 'products of semiosis' — while these are often very different from the structures that appear without any semiotic control in the non-living world, these may also be indistinguishable from the latter. An oligopeptide produced by a cell may be indistinguishable from an oligopeptide which has formed by a stochastic condensation of aminoacids, likewise a replacement of some stones in a stony seashore may be indistinguishable from a replacement resulted by waves, or even CO_2 synthesised by cells via respiration is as much CO_2 as the one that comes from burning. The products of life in these examples are not just *indistinguishable* - these are *the same* as the ones that are not products of life.

The latter implies something important. Because if the human-made artefacts are mostly well distinguishable from the things that are naturally formed in the non-living world, then due to the biosemiotically well-argued shift of semiotic threshold from the border of culture to the border of life, the distinction between the natural and life-made becomes structurally indistinguishable. In other words, what is *made* turns out to be both identical and non-identical to the things what are *not made*.

This is a very interesting case from the logical point of view, because on the one hand the distinction would need a term, but on the other hand, if we would introduce such a term, this would inevidently lead to a wish to define the qualitative difference — which is absent. Life is qualitatively different from non-life, but what it produces is both different and non-different.

How to solve this problem?

The solution would obviously require a more detailed description of the semiotic control.

The functional cycle (in Uexküll's sense) as a model of semiosis can be of some use here. It has always a double relation (recognition and action) to the object. This demonstrates well that from the side of recognition, the distinction is always qualitative, because the recognition of an object is controlled by memory. The results of an action

(production, manufacturing), however, are not directly controlled — the only way to control it will be again via a recognition. The action does some work — but this work may do almost everything. It may build, and it may destroy. In this sense, as the activities of life, even building and destroying turn out not to be basically different. Decomposition and synthesis are equally the parts of life's metabolism and activities, and these may become distinguishable only for some higher forms of life; both may need energy, both may need semiotic control; there is no principal difference at the level of enzymatic processes, whether the process is establishing or removing a chemical bond. Both may be exergonic or endergonic. Even the concept of negentropy does not make a difference here. Thus, indeed, life (the semiotic control) may influence almost any process in almost any way. Which means that knowing obviously always does more than it knows.

H. You are right. There is no simple way to distinguish a molecule that is synthesized under semiotic control from exactly the same molecule arising spontaneously. I discussed this problem in a paper titled *How does a molecule become a message* in which I concluded,

> A molecule does not become a message because of any particular shape or structure or behavior of the molecule. A molecule becomes a message only in the context of a larger system of physical constraints which I have called a 'language' in analogy to our normal usage of the concept of message. (Pattee 1969)

And as we agree, the simplest language or semiotic control process arises in the simplest self-replicating unit.

2. The principles and discoveries

K. For me, there are two fundamental observations or discoveries — or results — upon which the whole semiotic biology stands.

The first is the explanation for the biodiversity of species, and the variety of the types of categorizations. This is the answer to the

question 'Why there are species in the living world?' To put it very briefly, the biosemiotic answer is that communication (biparental reproduction being a kind of communication) in the non-categorised set of individuals would not be stable (Kull 1992). In other words, this is to explain why communication creates discretizations.

The second is the plurality of objects in the semiosphere. A thing in the physical world is just one, whereas in the semiotic world it is always many, it just cannot be one until it has a meaning (Kull 2007). Semiosis makes the world plural. Like, for instance, a painting — physically, it is a concrete pattern of pigments, but semiotically it is many things that can be recognised (or to what it refers).

From your point of view, what are the most important observations that motivated your interest in biosemiotics? And what are the important biosemiotic discoveries?

H. Living systems have always been a challenge, even a threat, to physicists who believe their laws are universal in principle, but appear to be no help in explaining life. *How do you explain why living systems are so clearly different from non living systems when they both obey exactly the same laws?* That was the question that first motivated me. I first saw this question in Karl Pearson's *Grammar of Science* (1937: 287), a copy of which my Headmaster gave to me in the 8th grade. I still have the book and refer to it. Many physicists worried about this problem, like Erwin Schrödinger, Niels Bohr, and Max Delbrück who are well known for their writing on the subject. Linguists, on the other hand, are understandably not concerned about this problem.

3. Roots and reminiscences

K. Semiotic biology is polyphyletic — it has several roots. Even the term 'biosemiotics' has been coined independently couple of times.[7]

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[7] Probably Rothschild's (1962) and Stepanov's (1971) usage of the term 'biosemiotic' were independent.

Contemporary biosemiotics includes scholars from different backgrounds and with different use of terminology, who after having recognized that their understandings match, accepted to build a shared conceptual apparatus, a common discourse.

The components of ideas that led me finally (in the end of 1980s) to biosemiotics, as I would reconstruct these now, include seemingly (a) my early and strong (and continuous) interest in theoretical biology (which led me to exchange a few letters with Conrad H. Waddington and Robert Rosen, in 1970s); (b) a strong semiotic (however, mainly cultural semiotic) school in Tartu; (c) contacts with biologists of non-neodarwinian views (on the one hand among Russian scholars, followers of the school of Lev Berg and Alexandr Lubischev, including the biologists of my own generation Sergey Chebanov and Alexei Sharov, and on the other hand the scholars carrying the tradition of Karl Ernst von Baer in Estonia); (d) my former participation in the research group of animal behaviour studies where I came across with Jakob von Uexküll's works (the search of his traces resulted in contacts with Thure von Uexküll, and via him with Thomas Sebeok); and certainly (e) the modelling research I carried out via which I understood the mechanism that is responsible for the emergence of species (which is very close to Hugh Paterson's recognition of the concept of species). After all this, and since the meeting with our Danish colleages Jesper Hoffmeyer and Claus Emmeche in early 1990s, biosemiotics remained the stable name for the work that followed.

Histories of life, of course, are always plural. What are the paths that led you to biosemiotics?

H. Well, it was not only Pearson's question of why life is so different from nonliving systems when they both obey exactly the same laws. It was Pearson's idealistic view even about physical theory that replaced my naive realism in thinking about both physics and biology. He made me see how all of our models are based on epistemological assumptions and limited by our modes of thought. Einstein's epistemology was influenced by Pearson's *Grammar*. Heinrich Hertz expressed

these limitations of our models in his *Principles of Mechanics* (Hertz 1956 [1894]: 1–2):

> We form for ourselves images or symbols of external objects; and the form which we give them is such that the logically necessary consequents of the images in thought are always the images of the necessary consequents in nature of the things pictured.
> [...] For our purpose it is not necessary that they [images] should be in conformity with the things in any other respect whatever. As a matter of fact, we do not know, nor have we any means of knowing, whether our conceptions of things are in conformity with them in any other than this *one* fundamental respect."

Besides Hertz's separation of the knower and the known, there was von Neumann's (1955: 419–420) discussion of measurement in which he shows why an *epistemic cut* between them is a conceptual necessity, although its placement is largely arbitrary. It was also von Neumann's (1966) logic of self-replication that made clear the necessity of symbolic description as distinct from material dynamics to allow an unlimited evolution of novelty.

I have acknowledged elsewhere (Pattee 2001) some of the other physicists, biologists, and philosophers that have influenced my thought.

K. There are several approaches and scholars whom we can identify as biosemioticians but who themselves did not know or use that term. For instance, after reading Robert Rosen's (1991) *Life itself*, I realised that he had reached the biosemiotic understanding — his emphasis is on the triadic relation.

H. There were indeed many physicists and biologists who, beginning in the 1950s, belonged to what Gunther Stent called the Information School of molecular biology (Stent 1968). It was generally recognized by this group that there was more to biology than just the molecular structures of DNA and proteins. Their focus on information clearly was a semiotic perspective.

Rosen was not a part of this group, but his emphasis on "relational biology" depended on semiotic rather than material relations. Rosen and I were friends for many years beginning with our studies of hierarchy theory in the 1960s. To us, hierarchies, like measurement, are also dependent on semiotic distinctions because hierarchical levels are recognized by the necessity of different descriptions. We also focussed on epistemology. Rosen's modeling relation was based on Hertz's statement above (Pattee 2007).

4. The way to proceed

K. A large part of the existing biosemiotic studies has been devoted to theoretical and philosophical questions. However, what should the semiotic approach mean for biological experiments and observations, what is its relationship to empirical studies?[8]

H. I see this question as the central issue for biosemiotics. Earlier in our discussion you mentioned the "need for a special term" for structures arising from semiosis. This terminology problem is a symptom of a larger problem that biosemiotics is facing. It is already clear from our discussion that my physics language is different from your semiotic language; but the problem is deeper than language. Physics and semiotics have two very different cultures, and biochemistry is a third culture. The problem is even worse because all these areas have subcultures with their special foci and terminologies.

I'm sure you are aware of this culture problem. The two of us are both motivated to try to resolve our different language problem by discussions like this one. Unfortunately this is not the common motivation of most biochemists. When they are confronted with the biosemiotics perspective, they often resist semiotic expression of the problems of life as nothing but restatements of what they describe in

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[8] Some points on the role of biosemiotic empirical research are described in Kull, Emmeche, Favareau 2008.

their well-developed material language, which they regard as a more scientific description of life.

It is not clear to me what biosemiotics wants to be. All I can suggest is that if its practitioners want it to be accepted as science rather than as philosophy, they must focus more on empirically decidable models, rather than emphasizing its linguistic and philosophical foundations. In other words, if biosemiotics claims that symbolic control is the distinguishing characteristic of life, and if it also claims to be a science, then it must clearly define symbols and codes in empirical scientific terms that are more familiar to physicists and molecular biologists.

On the other hand, if biosemiotics is not primarily the study of symbolic matter but the study of symbolic *meaning*, then as I have emphasized (Pattee 2008), this requires a different epistemological principle than does the study of physics and biology. It will also require a language more familiar to philosophers and linguists.

One must keep in mind that the biosemiotic concepts like symbol function and meaning arise only by natural or cultural *selection* from those constraint structures that *physical laws do not determine*; and yet all physical laws as well as all scientific models must be expressed in such symbol systems.

K. What should be the main biosemiotic questions in which the further research in biosemiotics should focus on? Can we give a brief list of these?

H. Again, it is not clear what the main contributions of biosemiotics will turn out to be. As we learn more about the complexity of genetic expression, the analogies of genetic memory and natural language may not carry beyond the fact that they both use discrete, linear strings from a small arbitrary alphabet. So far, we have found nothing in the network of neurons in the brain that interprets sentences anything like the cell interprets genes by the construction of proteins.

Molecular biology is currently totally involved with sophisticated technologies trying to unravel the functions and linkages in the masses of gene sequences data. These technologies already have specialized

names like genomics, proteomics, and even transcriptomics. Even though all these studies could be correctly described as biosemiotics, I think it is very unlikely that the biosemiotic literature will alter the style or language of these highly competitive and incredibly complex empirical technologies.

In my opinion, biosemiotics will make the most lasting contribution by addressing the classical problems inherent in symbolic description and control of material systems at all levels — *the symbol-matter problem*. In this way it will contribute most to the epistemic foundations of all the sciences, of both the living and the nonliving.

K. The main reason why we are developing the biosemiotic concepts is obviously just our wish to understand why and how life works. Since the questions we are dealing with are quite fundamental and related to several central questions of biology, it will also mean a reformulation (or rebuilding) of theoretical biology in many of its parts. Much of it comes out as a consequence from the application of the models of semiosis. The biosemiotic improvement of models of semiosis would probably also influence the whole theory of semiotics, which in its turn has consequences for humanities and for the relationship between physical sciences and humanities.[9]

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[9] Acknowledgements: to Fulbright Scholarship Program, the European Regional Development Fund, Center of Excellence CECT, ETF6669

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Биосемиотическая беседа: между физикой и семиотикой

В этом диалоге мы говорим о контрасте между непреложными законами физики и семиотической свободой жизни. Мы приходим к выводу, что необходимы дополнительные виды описания для материальных и символических структур, а также и для многих иерархических уровней этих структур. Далее дается разъяснение того, что мы имеем в виду под понятиями «законы», «ограничения», «правила», «символы», «память», «интерпретаторы» и «семиотический контроль». Кроме того, мы кратко характеризуем путь, который привел нас в биосемиотику, и размышляем о будущем биосемиотики.

Biosemiootiline vestlus: füüsika ja semiootika vahel

Käesolevas dialoogis räägime kontrastist vääramatute füüsikaseaduste ja elu semiootilise vabaduse vahel. Leiame, et on vaja komplementaarseid kirjeldusviise materiaalsete ja sümboolsete struktuuride, nagu ka nende struktuuride paljude hierarhiliste tasandite jaoks. Selgitame, mida peame silmas mõistete "seadused", "piirangud", "reeglid", "sümbolid", "mälu", "tõlgendajad" ja "semiootiline kontroll" all. Peale selle kirjeldame lühidalt isiklikke taustu, mis meid kumbagi biosemiootika juurde tõi, ja spekuleerime biosemiootika tulevikusuundade üle.

A text on biosemiotic themes

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What follows is a two-part review of Günther Witzany's two-part book, *The* Logos *of the* Bios (2006, 2007[3]). The first part of the review is written by Sergey Chebanov, and it approaches the text as a source of ideas on biosemiotics and biohermeneutics. The second part is written by Anton Markoš, and it estimates the biological pithiness of the book and the correctness of the reflection of the included data of modern biology.

On biocommunications and biocommunion

If new directions of thinking are marked by the occurrence of separate articles and their collections, a sign of the transformation of such directions into a high-grade discipline is the publication of books. I have already written about the appearance of the first monograph on biosemiotics (Chebanov 1998). For the last decade, the publication of monographs on biosemiotics was a very rare event. The work reviewed here is even more uncommon.

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[3] Hereinafter referred to as *LB1* and *LB2*.

As well as the previous book by the author (*LB1*), this is not a monograph in a strict sense, but a unified collection of articles published earlier, each of which develops the holistic plan of the author. Therefore it is perceived as a systematic presentation of the author's version of biosemiotics, quite comparable to a monograph.

As *LB1* and *LB2* are two parts of an integral composition, the parity of their subjects is clear too — the first book develops the general principles of the author's approach and the second one deals with their application to different biological material.

The essence of the author's approach consists in considering "change from a viewpoint of purely mechanistic biology to a viewpoint of a linguistic, semiotics, communicative biology" (*LB2*: 8; compare *LB2*: 203). It is determined that processes involving DNA are described by means of such linguistic categories as coding, copying, translation, transcription, etc. (*LB2*: 7).

The basis for both of the books is the statement introduced in 1938 by Charles Morris about the three dimensionality of semiosis — the levels of semantics, syntactics and the pragmatics are necessary for the study of sign-mediated interactions (the subtitle of *LB1* is *Contributions to the Foundation of Three-Leveled Biosemiotics*; however it is the connection of these categories with Heidegger-Gadamer hermeneutics that is important for Günther Witzany).

But perhaps the brightest idea of the author is that the living being is regulated by semiotic rules (*LB2*: 13, 15–17, 183) which grow out of some natural or cultural convention[4] (*LB2*: 10), instead of natural laws (*LB2*: 13, 203 and the section *From Umwelt to Mitwelt*[5] — *LB2:* 207–226).

Moreover, the author comes to the conclusion that cells, tissues, organs, organisms, etc. require the existence of communicative processes as the interactions mediated by signs are regulated by specified

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[4] Usually this statement is considered to be the basic principle of semiotics. However, the reviewer supports a different view on semiotics.

[5] Terms by J. von Uexküll who is considered as one of the predecessors of biosemiotics (e.g., Uexküll 1909).

semiotic rules (*LB2*: 203, 227). Thus it appears that such interactions are not formalized and non-algorithmized (*LB2*: 203, 227) because it is the interactions that allow the existence of non-formalizable rules of content-generation (*LB2*: 231).

I believe that this idea about the existence of algorithmized and non-algorithmized semiotic rules is the most significant achievement of the author, and that it has very important consequences.

In my opinion, this idea may serve as the basis for the opposition between semiotics (in the lines of Charles Sanders Peirce and Ferdinand de Saussure) that deals with algorithmized semiotic rules, and hermeneutics, according to which the interpretation arises at the reference to the texts constructed according to non-algorithmized semiotic rules. Accordingly, on the same basis, it is possible to oppose biosemiotics to biohermeneutics[6]. In private discussions and correspondence with the author, we have reached a full mutual understanding on this question. However, there are some terminological complications here.

The problem is that the central category used by Witzany is "communication". First of all, "communication" is a tool for data transmission. The opposite of communication in this aspect is "communion" (compare Greek *koinonia*) — personal interaction, that is not only utilitarian, but also valuable in itself. Then it would be possible to present a relationship of the basic concepts by the following table:

Algorithmized semiotic rules	**Non-algorithmized semiotic rules**
semiotics	hermeneutics
biosemiotics	biohermeneutics
communication	communion
biocommunication	biocommunion

[6] Nevertheless, Günther Witzany refrains from the opposition, preferring to speak about three-level biosemiotics (see *LB1*) in order not to enter in discussions on the ontological problems connected with hermeneutics.

English "communication" can be opposed to a considerable degree to "communion" which can designate the sacrament of communion as well. In that case all the concepts developed by Witzany would have a clear terminological structure. A lack of this categorical network is why it looks very much anthropomorphic. This was the reason why the reviewer (Chebanov 1995) has introduced the term "enlogue" for the designation of interaction like communion between any items (not only between reasoning persons), which has been favorably accepted by Witzany too.

However, in private correspondence Günther Witzany emphasizes that communication in Jürgen Habermas' (1984, 1987) understanding cannot in principle be understood as defined only by algorithmic rules[7]. That is obvious when we deal with the question of interaction between the artificial languages of science and the language of daily dialogue. Similarly, Karl Jaspers and Karl-Otto Apel understand communication in a non-algorithmic way (*LB2*: 200–202; Witzany studied hermeneutics under Karl-Otto Apel).

In this point, it would seem that everything is clear and there is nothing left to disagree with. However, I think that this is not completely true. Actively working experts could probably understand what is the subject under the discussion, but it is doubtful that an ordinary reader could make this analysis.

From the reviewer's point of view, the construction discussed above is the most important part — the conceptual kernel — of G. Witzany's two-volume work, owing to which it reaches the status of a new stage of development in biosemiotics. And its concrete descriptive part is no less fascinating.

Having laid out the new conceptual construction, there only remains the task of tracking this construction in various empirical areas of the discussed subject. This is exactly what Günther Witzany does.

Thus main significance of *LB2* lays in the consideration how the proclaimed principles work in concrete sections of biosemiotic work,

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[7] The structure of this book served as a model for the two volumes by Günther Witzany discussed in the present review.

as they are manifested in different groups of organisms (in the four kingdoms of organisms — in plants, pp.19–56; fungi, 57–84; animals, 85–118; and bacteria, 119–150; but also in viruses — pp. 151–182). Witzany performs the biosemiotic categorization of a great volume of the newest empirical material in order to build the *system of biosemiotics*.

The table of fig. 1 (*LB2:* 11) acts as a structural basis for this system. It describes the forms of communication of prokaryotes, protocists, animals, fungi, plants and human beings on intra-, inter- and meta-organismic (interspecific) levels with a special attention to semantics, syntactics and the pragmatics of interaction.

It is necessary to note at once, that the specified sections divided on taxonomic principle are characterized by a considerable volume, fair thoroughness, methodical regularity (manifested in the parallelism of subsections, the consideration of similar schemes, the repeating structure of the argumentation). This definitely increases the argumentative persuasiveness of the work, but it gives some ponderousness to the book and, for example the present reviewer as an author would never dare to go such a way.

At the same time, each section has some findings by the author, which give additional appeal to the book as a whole. Thus, in section 1, *Plant communication from biosemiotic perspective*, the communication of plants is treated as their reaction to the influence of various signals — abiotic and biotic — and different languages of such communication are considered. In this aspect auxin acts depending on the context as a hormone, morphogen or neurotransmitter (*LB2:* 23). The dictionary of chemical language includes secondary metabolites, neurotransmitters, hormones, etc. (*LB2:* 24–25). Different levels of interaction of plants are analyzed in a similar way.

Perhaps the most valuable in this section is the attention paid to the root apex (*LB2:* 21, 23, 35–37) which functions comparably to the brain of animals (see, e.g., Frantisek Baluska's works – Baluska 2006; *LB2:* 23, 27, 36), and drawing the attention of biosemioticians to this material.

Section 2, *Fungal Communication*, is of special interest because the author is mycologist for his narrower biological specialty. It gives the chance to him to consider a wide range of rather specific questions from the biosemiotics point of view, all of them interesting phenomena from the point of view of general biology: for example, lichens (*LB2:* 63) and other kinds of fungal symbiosis (*LB2:* 63–67) as well as the semiotic aspects of infection of fungal mitochondria by double-stranded RNA or DNA viruses (*LB2:* 75–77).

According to the composition of the book, Section 3, *Coral Communication*, has to represent the three-level semiosis in animals. Such composition has turned out to be very successful for two reasons. First, having refused the claim to present all completeness of semiotics processes in animals, the author releases himself from the necessity to retell banality. Secondly, having chosen not simply corals, but the processes of communication during their morphogenesis, Witzany has an opportunity to discuss the newest data on this subject, which has become one of the models for molecular genetics of morphogenesis. Thus he pays special attention to the archaism of this group (*LB2:* 103) thanks to what the results obtained can be transferred on to a rather wide circle of more highly organized animals.

Section 4, *Communicative competences of bacteria*, concentrates first of all on the claim that for bacteria the key characteristic is not unicellularity, but rather the formation of multilevel supercellular units — biofilms (*LB2:* 120–122) — connected to inter-level communication and epigenetic relations (*LB2:* 121). Such statement forces us to pay special attention to different types of symbiotic relations between bacteria. Thus, the focus is not on the classical characteristics of bacteria as prokaryotes, but on the fact that the organization of their genetic systems defines the large role of horizontal transmission of the genetic material (*LB2:* 125–133) carried out by viruses (*LB2:* 134–135). Thus the viruses perform natural editing of the genome (*LB2:* 138–141).

The idea of natural editing of the genome is a basis for the two following sections of the book. Section 5 is specially devoted to the ability of viruses to perform natural editing of genomes, and Section 6

is devoted to a statement on the original theory of serial endosymbiogenesis (*LB2:* 188–199). The latter is some kind of a synthesis between popular representations about symbiogenesis by L. Margulis and the ideas of V. A. Kordjum about the role of viruses in global transmission of the genetic information by transduction on the basis of three-level biosemiosis. In this context it becomes clear why the author paid so much more attention to different types of symbiotic relations in the previous sections.

The material discussed above allows us to assert that before us is a rather uncommon book which very clearly formulates indisputable basic principles of biosemiotics. Of special interest is the attempt to construct the *system of biosemiotics* which, as well as many other things in biology, is constructed on taxonomic principles. An additional appeal is given to the book by the inclusion of various very new empirical data. It is quite clear that a part of the interpretations is debatable. The idea of serial endosymbiogenesis is debatable, too. Nevertheless it gives completeness and symmetry for the whole conceptual construction, generalizing very diverse empirical and theoretical materials.

On factography

I approached the two books with a great expectation: I know Witzany as an enthusiastic propagator of a new view of life.[8] He developed a three-level model of communicative processes (intra-, inter-, and meta-organismic), as well as a system of syntactic, pragmatic, and semantic rules reigning the living.

Browsing through both volumes reveals that they are not compiled as monographs: with the exception of two Introductions and one Epilogue they represent a collection of author's previous works. Of 205 pages of *LB1*, 85 comprise reprints of two chapters from his earlier

[8] Witzany 2000; a translation of a German original published in 1993. This book is, to a great extent, a collection of author's older papers.

book (Witzany 2000); the rest of *LB1* is a collection of 6 papers published in various journals and proceedings in 1990s and 2000s, united only by the Introduction (11 pages). Of seven chapters of *LB2* only two were not published elsewhere. I do not criticize reprinting older works, even outdated, when the author states what is the objective of doing so. Here, however, the absence of comments or amalgamating text is quite a drawback:

(i) No comments are given to anachronisms, especially concerning papers from the early 1990s. We read, e.g., about Vollmert's theory from the 1980s on evolution driven by DNA prolongation, accompanied by emergence of new genes. Witzany of course must know that later achievements in genomics have not validated the theory, but makes no attempt to comment or correct on the reprint.

(ii) *Redundancy* is very annoying throughout the reading, especially in *LB2*, where several chapters are built according to a common scheme, with almost identical diagrams in each. Obviously, reviews on plant, fungal, coral, bacterial, or virus-mediated communication, when published in different special journals, allow such a strategy, but piling them up in a single volume calls for an extensive editing. The same holds for many *clichés*: For example, a grievance that most biologists take non-coding DNA for "junk" (completely untrue in my opinion), became a mantra repeated over the texts.

(iii) Technical language. If you send a review to, say, *Plant Signaling and Behavior*, you will expect that its readers are in command of special terminology of plant sciences. No such expectation is allowed in a collection bringing together so many multifarious subjects. Consequently, a glossary of basic concepts should be an obvious part of both volumes, especially when taking into consideration the specific style of the author, as will be discussed below.

This mosaic character of the collection is in a fractal-like manner retained also at the level of texts proper. Often paragraphs follow each other without any link-up; and even sentences in a single paragraph follow each other without any clear context, as if copied and pasted from different resources they refer to. Moreover, very often the reader

has an impression that there is no feeling for different levels of knowledge: banal textbook truths and concepts are served intermixed with very special factography — even within a single paragraph — with each sentence furnished copiously with a reference to some article or book. Peculiar is also the selection of references. Of course, the author has the right to choose any work in support of his point, but it should be clear that he knows also the mainstream views, and he should give reasons why he prefers the alternatives. For example, when speaking of endosymbiotic theory, he keeps referring to (somewhat outdated) views of Lynn Margulis, but no reference is given to more recent and well-elaborated mainstream research.

To support my not very amiable statements, I give below a closer parsing of Chapter 5 from *LB2*. It starts with very ambitious statements (my italics):

> It is becoming increasingly evident that the driving forces of evolutionary novelty are not randomly derived chance mutations of the genetic text, but a *precise genome editing by omnipresent viral agents*. [...] Non-coding, repetitive DNA sequences [...] are now recognized as being of viral descent and crucial for higher-order regulatory and constitutional functions of protein structural vocabulary. (Witzany 2007: 151)

The author argues that this editing proceeds according to 3-step competences (syntactic, semantic, and pragmatic) which are characteristic for viral particles. The abstract of the chapter ends with the statement:

> There is growing evidence that *natural genome-editing competences of viruses are essential* (1.) for the evolution of the eukaryotic nucleus (2.) the adaptive immune system and (3.) the placental mammals. (Witzany 2007: 151–152)

The reference list of the article contains 75 items, my counting says that there are 140 in-text links. Out of these, however, 60 refer to two works only: one book and one paper (a review on the same topic) by Luis P. Villarreal; hence, most crucial statements rely to this single author.

We get a short introduction about non-coding DNA in eukaryotes, and come to part 2 discussing the role of non-coding regulatory networks in the genome. I give an illustrative paragraph (sentence numbering is mine, number of references in square brackets):

> [1] Clearly, mobile sequences such as transposons and retroposons[ref] and non-coding repetitive elements [...] enable far-reaching DNA rearrangement and reorganization[4 refs]. [2] Together, they play a decisive role in the evolution of new genomic structures[4 refs]. [3] Depending on the organism's state of development, the varying chromatin markers are, thus capable — through different methylation patterns, histone modifications and alternative splicing — of creating a set of "multiple protein meanings"[ref] from one and the same genetic data-set[8 refs]. [4] This even characterizes the rise of epigenetics, i.e. the view that phenotypic variations, which are heritable, need not be connected with genetic alterations[5 refs]. [5] The question arises as to how and why the evolution of higher genetic complexity is connected to non-coding DNA, formerly termed "junk"-DNA? (Witzany 2007: 153)

If you take first three sentences separately, they are true; but how does the sentence (3) follow from the first two? Does it suggest that chromatin markers arose by genome rearrangement and reorganization? What are those elusive chromatin markers? What *I* took for chromatin markers, i.e. "different methylation patterns, histone modifications and alternative splicing" are here but epiphenomena of true markers. How such markers create "multiple protein meanings"? I supposed that such meanings are given by previous history of the cell body and the state of protein "ecosystem" in it. Epigenetic states create themselves, they are not created genetically — after all that is why they have got their name. The sentence (4) makes little sense: epigenetics is not a view, and "the view that phenotypic variations, which are heritable, need not be connected with genetic alterations" is more than one century old, thus does not follow from the knowledge of transpositions. The last sentence suddenly introduces yet another motif: it takes us from the realm of ontogeny into evolutionary processes.

Enough of illustrations; the reader can continue with the following paragraph, which connects "enzyme proteins" with DNA editing as

tools for — actually, what?; continues with the list of processes in chromatin; with Watson allegedly inventing in 1992 what was already a textbook knowledge at that time; up to "linguistic features of non-coding DNA". The section ends with a statement that "natural genetic engineering" is different from "artificial" one, because "The former provides ontologically genuine products that are evident in all living beings and life processes, whereas the latter attempts to achieve modifications and improvements by copying the natural genome-editing competences" (Witzany 2007: 155). What have we learnt so far?

Part 3 of the same chapter — 'Major viral life-strategies' (pp. 155–158) — relies almost completely on the above-mentioned works by Villarreal. Again, we get sudden jumps from retroviral (and their derivative) composition of human genome, to virus abundance in the ocean water, to general information about viral types and the strategy of their reproduction. We learn that "viruses can parasitize almost any replication system — even prebiotic ones — and probably emerged well before the appearance of cellular life forms" (?), yet "most viruses, however, are stable, persistent living beings that do not colonize a host organism for simple selfish purposes" (Witzany 2007: 156, 157). The term fitness must be modified, on the base of the statement that "The fact that viruses are silent companions of virtually all organisms and that they play a decisive role in the evolution of the host has been largely ignored" (Witzany 2007: 157–158).

I skip analyzing part 4 on strategic patterns of viruses — I simply cannot understand it — and move to part 5: 'Pre-cellular viral life'. Somehow I did not get any information of how could viruses endure in a world without cells; instead I read about "RNA proteins", "DNA transaction proteins", "DNA viruses infecting RNA viruses". We move now to the main body of the text, consisting of parts 6, 'The origin of eukaryotic nucleus'; 7, 'The origin of the adaptive immune system'; 8, 'The evolutionary innovation of placental mammals through endogenous retroviruses'. From reading these parts I understand that L. P. Villareal is of opinion that retroviruses are responsible for all that, and that Witzany agrees with him. But this is a summary — the text itself will not allow such conclusions.

I know Günther Witzany personally and know that our views are very close. I also emphasise the semiotic and hermeneutic nature of life, of which contemporary biology is but one possible projection. Yet I feel that uncritical piling of biological facts is not the way to persuade our learned colleagues — in biology or elsewhere.

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ISSN 1406–4243