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# Sign Systems Studies

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## Toward a concept of pluralistic, inter-relational semiosis

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**Abstract.** Brief consideration of (1) Peirce's 'logic of vagueness', (2) his categories, and (3) the concepts of *overdetermination* and *underdetermination*, *vagueness* and *generality*, and *inconsistency* and *incompleteness*, along with (4) the abrogation of classical Aristotelian principles of logic, bear out the complexity of all relatively rich sign systems. Given this complexity, there is *semiotic indeterminacy*, which suggests sign limitations, and at the same time it promises *semiotic freedom*, giving rise to sign proliferation the yield of which is pluralistic, inter-relational *semiosis*. This proliferation of signs owes its perpetual flowing change in time to the inapplicability of classical logical principles, namely Non-Contradiction and Excluded-Middle, with respect to elements of *vagueness* and *generality* in all signs. Hempel's 'Inductivity Paradox' and Goodman's 'New Riddle of Induction' bear out the limitation and freedom of sign making and sign taking. A concrete cultural example, the Spaniards' world including the Virgin of Guadalupe and the Aztecs world including their Goddess, Tonantzín, are given a Hempel-Goodman interpretation to reveal the ambiguous, vague, and complex nature of intercultural sign systems, further suggesting pluralism. In fact, when taking the 'limitative theorems' of Gödel, Turing, and Chaitin into account, pluralism becomes undeniable, in view of the *inconsistency-incompleteness* of complex systems. A model for embracing and coping with pluralism suggests itself in the form of *contextualized novelty seeking relativism*. This form of pluralism takes *overdetermination*, largely characteristic of Peirce's Firstness, and *underdetermination* largely characteristic of Peirce's Thirdness, into its embrace to reveal a global context capable of elucidating local contexts the collection of which is considerably less than that global view. The entirety of this global context is impossible to encompass, given our inevitable finitude and fallibilism. Yet, we usually manage to cope with processual pluralism, within the play of *semiosis*.

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### Vagueness anyone?

Charles S. Peirce occasionally alluded to what he labeled 'logic of vagueness' as 'logic' in 'the broadest possible sense'. Obviously, such 'logic' would go against the grain of classical bivalent logic insofar as it was developed in Peirce's time in part by Peirce himself, as well as by Boole, de Morgan, Whatley, Schröder, and others. One might expect that such a 'logic of vagueness' would follow the lines of 'triadic logic'. But it must be more than that. As 'logic' in 'the broadest possible sense', it should offer a foreshadowing of today's 'fuzzy logic' and 'paraconsistent logic'.<sup>1</sup> Although Peirce never made good

<sup>1</sup> 'Fuzzy logic' has at least two chief sources over the past century. The first was initiated by Peirce during his occasional ruminations on a 'logic of

on his promise to construct this general 'logic', in 1908 he did envision a 'triadic logic' based on 'real possibility', 'actuality', and 'real necessity', in line with his categories, *Firstness*, *Secondness*, and *Thirdness*. I turn to Peirce's effort along these lines as the preliminary stage in outlining a concept of pluralistic, inter-relational semiosis.

Peirce points out that a proposition asserting actual *existents* (Seconds) lies at the half-way house between the poles of assertion of *possibility* (Firstness) and those of *necessity* (Thirdness).<sup>2</sup> While assertions regarding *existents* or 'actuals' follow the tenets of classical logic, assertions of *possibility* and *necessity* do not, not necessarily, that is. In Peirce's words:

that which characterizes and defines an assertion of Possibility is its emancipation from the Principle of Contradiction, [...] while that which characterizes and defines an assertion of Necessity is that it [...] throws off the yoke of the Principle of Excluded Third; and what characterizes and defines an assertion of Actuality, or simple Existence, is that it acknowledges allegiance to both formulae, and is thus just midway between the two rational 'Modals', as the modified forms are called by all the old logicians. (MS 678: 34–35)

What lies within the sphere of possibility (Firstness) by and large violates the *Principle of Non-Contradiction*, the principle that customarily reigns in the 'semiotically real' world of Secondness and classical logic. Within the sphere of Firstness, contradictories can quite comfortably exist side by side, for, given the nature of unactualized Firstness as a superposed set of possibilities, everything is there, timelessly. The sphere of Firstness composes an unimaginably massive, continuous collage of compatible and incompatible, consistent

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vagueness'. Peirce's concept of *vagueness* later became the focus of studies by Brock (1979), Chiasson (2000), Engel-Tiercelin (1992), Merrell (1995, 2003), and Nadin (1982, 1983), among others. The second source is an outgrowth of work with 'fuzzy sets' in the 1960s and 1970s by Lofti Zadeh (1965, 1975). Regarding 'paraconsistent logic', which plays havoc with the classical Principles of Non-Contradiction and Excluded-Middle, see early work by Newton da Costa (1974), and later, especially Graham Priest (1989, 1991, 1998) and Carnielli, Coniglio and D'Ottaviano (2002).

<sup>2</sup> According to Peirce, any conceptual body of knowledge, no matter how complex, can be reduced to triadicity (three 'categories'), but triadicity cannot be further reduced. Although limited time and space do not permit my expounding on the categories in this essay, I would recommend Almeder (1980) and Hookway (1985).

and inconsistent, and complementary and contradictory, *nonessences*. It is pure chance, spontaneity, infinitely diluted *vagueness*. Nothing is (yet) specified, and everything is virtually at one with everything else. There are as yet no distinctions, no borders, and no taxonomies. There is no static *plenum, per se*, but rather, effervescent, fluctuating, flickering, superposed *possibilia* in expectancy of their actualization into Secondness. Thus *vagueness* is thoroughly *overdetermined*. There is no knowing whether what would otherwise be considered two or more contradictory terms might not be considered equally 'true' at different times and places (e.g. the 'Earth' as center of the universe before Copernicus, the 'Sun' as center of the universe after Copernicus, and, after Einstein, neither the 'Earth' nor the 'Sun' is center but, so to speak, every place is its own center).<sup>3</sup>

The sphere of probability or necessity (Thirdness) includes mediation of terms, and mediation of mediations, with no end in sight. Thus, any and all sets of signs remain invariably *incomplete*; something more can always be added. Hence, unlike the crisp *eithers* and *ors* of Secondness, within Thirdness, the *Excluded-Middle Principle* threatens to fall by the wayside. Among any given set of signs, with sufficient time and changes of context, the potential always exists for other signs and their meanings, or the same signs and other meanings, to emerge and gain favorable recognition. It is not a matter of the 'center' of the universe *either* as the Earth (Ptolemy) *or* the Sun (Copernicus), but now, it is *neither* the one *nor* the other, but something else that may be in the process of emerging. In other words, the 'center' for Ptolemy and the 'center' for Copernicus is not simply a matter of *either-or* alternatives: with the demise of classical physics, the 'center' can now conveniently be conceived as something else altogether (i.e. something entered the gap between the erstwhile *either/or* categories to render them *neither-nor*). Consequently, given sufficient time, any and all conceptual schemes are destined to *incompleteness*, since no matter how replete the previously considered gap between the *either* and the *or* is filled, there will always be room

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<sup>3</sup> It will become evident that in this context I do not use *overdetermination* in the Freudian sense. It is not a compulsory drive to force all possible signs toward some predetermined end, but rather, an undetermined number of possible paths are always available to the range of possible signs; hence *overdetermination* offers an indefinite multiplicity of consequences for an indefinite set of sign possibilities.

for something else. Due to this persistence of *incompleteness*, *underdetermination* necessarily prevails.

*Overdetermination*, in contrast to *underdetermination*, includes the domain within which a sign is not yet definitely or authoritatively decided, settled, or fixed — though according to the circumstances it presumably can be — and as such it is not bound by definite limits or restrictions.

*Overdetermination* is basically related to Firstness, as well as to the concepts of *vagueness* and *inconsistency*. However, *overdetermination*, in the *purest sense*, is actually tantamount to what we might label ‘pre-Firstness’, before there is or can be consciousness of a sign (Baer 1988). Consciousness of a sign, during the very moment it is emerging, remains *vague*, to be sure. As consciousness of the sign becomes more pronounced, and *vagueness* gives way to increasing precision, a small number of the indeterminate range of possible specifications of the sign can become actualized as Seconds to take their place in what is perceived and conceived to be the ‘semiotically real’ world usually interpreted in terms of *either/or* categories. But whatever specification might have been actualized, others remain as possibilities, some of them contradictory with respect to that which was actualized. In other words, regarding the Secondness and Thirdness of signs of which there is consciousness, and regarding which specification of meaning can be made more precise, *underdetermination* (qualified by *generality* and *incompleteness*) stands a chance of making its presence known here and there.

In another way of putting it, within the sphere of *overdetermination*, mutually incompatible possibilities of meaning can cohabit without undue conflict (and as a result, the *Principle of Non-Contradiction* loses some of its sting); within the sphere of *underdetermination*, actualized meanings within one timespace context can become something slightly to radically different within another timespace context (hence the *Excluded-Middle Principle* does not strictly apply).

### Playing one side against the other

The sphere of *vagueness* (of *possibilia*, Firstness) is timeless, while that of *generality* (actuals developing toward the fullness of Thirdness) is time-bound. By the very nature of this interrelationship, signs of *generality* are destined to suffer a fate complementary with that of signs of *vagueness*.

In this spirit, Peirce wrote that “[n]otwithstanding their contrariety, generality and vagueness are, from a formal point of view, seen to be on a par” (*CP*: 5.447). *Vague* signs cannot be construed as *vague* unless endowed with at least a tinge of *generality*, and *general* signs, given their inevitable degree of *incompleteness*, are invariably somewhat *vague*. Peirce readily conceded that no sign can be equally *vague* and *general* from the same perspective and from within the same timespace context, since insofar as the determination of a sign is extended to the interpreter — i.e. the case of *generality* — it is by and large denied to the utterer, and insofar as it is extended to the utterer — i.e. the case of *vagueness* — it lies largely beyond the grasp of the interpreter (*CP*: 1.463–69, 5.447–57). By no means, however, do I wish to imply that Firstness has a monopoly on *vagueness*, but rather, *vagueness* to a greater or lesser degree pervades any and all signs.

It bears mentioning that the interrelationships herein implied between *vagueness* and *generality* — and *overdetermination* and *underdetermination* — are not customarily forthcoming in philosophical discourse. To cite certain notable exceptions, Bertrand Russell (1923) relates the law of excluded-middles exclusively to *vagueness*. Willard V. O. Quine (1953, 1960) focuses almost obsessively on *underdetermination* with respect to scientific theories, and by extension, natural language. More recently, Donald Davidson (1984) throws *vagueness* into the same bag with *generality* and *incompleteness* without showing how they are agonistically set apart and at the same time intricately intertwined.

That much said, the inevitable *vagueness* and *generality* of all signs, however small, suggests that every sign is at least partially determined, and its partial determination is contingent upon its varying degree of context-dependent *vagueness* and *generality*:

A sign (under which designation I place every kind of thought, and not alone external signs), that is in any respect objectively indeterminate (i.e. whose object is undetermined by the sign itself) is objectively general in so far as it

extends to the interpreter the privilege of carrying its determination further. Example: 'Man is mortal'. To the question, What man? the reply is that the proposition explicitly leaves it to you to apply its assertion to what man or men you will. A sign that is objectively indeterminate in any respect is objectively vague in so far as it reserves further determination to be made in some other conceivable signs, or at least does not appoint the interpreter as its deputy in this office. Example: 'A man whom I could mention seems to be a little conceited'. The suggestion here is that the man in view is the person addressed, but the utterer does not authorize such an interpretation or any other application of what she says. She can still say if she likes, that she does not mean the person addressed. Every utterance naturally leaves the right of further exposition in the utterer, and therefore, in so far as a sign is indeterminate, it is vague, unless it is expressly or by a well understood convention rendered general. (CP: 5.447; also 1.434)

Thus, "a sign can only escape from being either vague or general by not being indeterminate". Yet no sign "can be absolutely and completely indeterminate" (*vague*) (CP: 5.506). For a sign, "however determinate, may be made more determinate still, but not [...] absolutely determinate" (*general*) (CP: 3.93). This is to say that if a sign were totally determinate, it would always be as it is, its attributes remaining intact and changeless. And if a sign were totally indeterminate, it could not have become an *actual sign* (of Secondness) for some interpreter *in* some sense or other.

In everyday situations, when the plethora of potentially variant timespace contexts comes into the picture, the possibility of any absolutely determinate sign dissolves. There was President Bill Clinton as now neoliberal, now for social programs, now wooing the conservatives, now catering to the business community, now also of the working class and capable of eating hamburgers and French fries with the best of them, now favorable to the educators, now sympathetic with women and minority groups and gays, now friendly with the women folks but doing nothing improper, now intimate with members of the opposite sex but still morally upstanding, and these days, Bill Clinton is ex-president and knowledgeable observer of the global scene and campaigner for his wife's presidential nomination. Bill Clinton, like all signs, can be many things to many people. Like all signs, he simply cannot stand still. Were a changeless sign actually to exist, it would be autonomous, individual, and indivisible. However, such absolutes "can not only not be realized in sense or thought, but cannot exist, properly speaking. For whatever lasts for any time,

however short, is capable of logical division, because in that time it will undergo some change in its relations” (CP: 3.39 n1).

So, every sign must relate to some not-quite-absolutely-general ‘semiotic object’.<sup>4</sup> The ‘object’ cannot be the absolutely ‘real object’ as it is, for all ‘objects’ are related to all other ‘objects’ of a given field of signs. To be sure, all signs relate to some singular ‘object’, at least potentially understood by all semiotic agents. But since the ‘really real’ in all its plenitude lies perpetually beyond our grasp, there must exist some lesser sphere containing signs and their ‘semiotic objects’. That sphere is partly shared by the semiotic agents involved in dialogic exchange, and those signs and semiotic ‘objects’ are to a greater or lesser degree *general*, though never absolutely so, and hence they are to a greater or lesser degree *vague*. *Vagueness* and *generality* are in this sense *complementary* forms of *semiotic indeterminacy*. A sentence can be determinately judged either ‘true’ or ‘false’ in a given ‘here-now’, though in the ‘there-then’ its value might have suffered a change — in this manner Peirce’s conception of ‘logic’ in the ‘broadest possible sense’ embraces temporality. And a sentence that has been determined either ‘true’ or ‘false’ in one respect may be neither ‘true’ nor ‘false’ in another. A sound can be neither blue nor red in the literal sense, though it may conceivably be either the one or the other in the synaesthetic sense. Consequently, the predicates ‘shrill’ or ‘mellow’, ‘bitter’ or ‘sweet’, or ‘blue’ or ‘red’ attached to the sign can be *both* ‘true’ *and* ‘false’ from within the range of all possible conceptions.

*Vagueness*, given its nature as indefinite, ambiguous, and indeterminate, takes the terms ‘possibility’, ‘chance’, ‘spontaneity’, and ‘novelty’ into its embrace. *Generality* includes the Peircean terms ‘potentiality’, ‘convention’, ‘necessity’, ‘conditionality’, and ‘regularity’ — all of the category of Thirdness — which imply process, growth, intellect, and mind (CP: 1.340). Generality thus calls for ever greater account of particular signs and their attributes as types. Yet, to expect absolute determinacy through generality is out of the question: there can be no more than an approximation toward a sign’s meaning

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<sup>4</sup> Peirce uses the term ‘object’, and I attach to it the term ‘semiotic’, to distinguish it from the ‘independently real’ object in the physical world. Actually, elsewhere I have used a tripartite set of terms, ‘object’, ‘act’, and/or ‘event’, all of which can qualify as signs, the latter two terms themselves interrelating with one or more ‘semiotic objects’ (Merrell 1997, 2000, 2003).



in its most general sense.<sup>5</sup> While generality entails relations to semiotic 'objects', vagueness bears no form or fashion of relatedness of signs *to* other signs established *by* some semiotic agent. Pure vagueness (Firstness) is the superposition of all possibilities without any of them (yet) being actualized. However, vagueness of actual signs (Secondness) requires their concrete contextualization and their being related to other signs. Such actualized signs, according to their interpretation, can now take on generality (Thirdness). It is for this reason that further determination of a general sign is left to the conceptual scheme, the criteria, and the style of reason and the wishes and whims of its interpreter. In contrast, determination of a vague sign depends upon further revelation and specification of its meaning by its author and the context of its engenderment.

In view of the *complementarity* of *vagueness* and *generality*, in a finite community of fallible semiotic agents, there can be no unadulterated sign of *generality* without at least a tinge of *vagueness*. And there can be no purely *vague* sign, for once actualized in order that it be made intelligible; a *vague* sign must take on at least some modicum of generality according to its interpreters' inevitable beliefs, habits, presuppositions, prejudices, and preconceptions. If any form or fashion of a 'logic in the broadest possible sense' there may be, it must include the spheres of both vagueness and generality. The upshot is that insofar as we, semiotic agents, are concerned, all generals are also possibly false at some time and place or another (i.e. the incompleteness of underdetermination), therefore they can be taken only conditionally as necessary, those conditions always remaining subject to their partial fulfillment, or in the event that they are false, to their unfulfillment.

Now for a further look at the *complementary* role of a sign's author and its interpreters — themselves also signs.

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<sup>5</sup> The allusion here is to Peirce's often maligned idea that science — and knowledge in general — is in a process asymptotically of approximating the truth (for a critique of Peirce's convergence theory, see Rorty 1991; for a discussion of the pros and cons, Skagestad 1981; for a defense, Hausman 1993).

### Our signs' elusiveness

Taking into account the composite characteristics of possibility (Firstness), actuality (Secondness), and potentiality (Thirdness), what I have summarily alluded as a *Principle of Indeterminacy* is crucial to an understanding of Peirce's notion of *semiosis*.

Quite obviously, Peirce was keen on the idea that we dwell in a *vague* and *inconsistent*, and *general* but perpetually *incomplete*, world of signs. The ubiquity of *vagueness* and *inconsistency* breeds a tendency to embrace *contradiction* and *paradox*. And the inevitability of *incompleteness* in all signs of *general* nature allows for the entrance of unexpected thirds without conceivable end. Yet, Peirce writes in so many ways that the collusion of *possibility*, *actuality*, and *potentiality* makes up our 'semiotically real world' as we perceive and conceive it, which, if we are fortunate, stands a chance of approximating some portion of the 'real'. Any and all 'semiotic worlds', in this light, must remain radically uncertain, for, "when we busy ourselves to find the answer to a question, we are going upon the hope that there is an answer, which can be called the answer, that is, the final answer. It may be that there is none." (CP: 4.61)

To be more specific, Peirce does not use the pair of Kurt Gödel terms, *inconsistency* and *incompleteness*, now commonplace in mathematics, logic, and physics (Nagel, Newman 1958; Goldstein 2005). However, his *vagueness-generality* dyad is brought in line with something reminiscent of a Gödelian framework by Nicholas Rescher and Robert Brandom (1979: 124–26), though admittedly for a different purpose (see also Merrell 1995; Nadin 1982, 1983). The relationship between *vagueness-generality* and *inconsistency-incompleteness* and their relevance to *indeterminacy* (or *undecidability*) becomes apparent if one sufficiently contemplates Peirce's suggestion, as cited above, that "[e]very utterance naturally leaves the right of further exposition in the utterer; and therefore, in so far as a sign is indeterminate, it is vague, unless it is expressly or by a well-understood convention rendered general". In other words, the indeterminately vague sign calls out to its maker for further clarification, since that which can render it less vague is more accessible to the possibilities that lie before her than before the sign interpreter.

If a sign of vagueness includes contradictions, then the sign's meaning for one community might be incompatible with its meaning

for another community at the same or another time, or that same community at another time. And if a sign of generality is never determined to the extent that it cannot be determined further, then an unordered set of potential interpretations exists with the characteristic that between any given pair of alternate interpretations there can always be a third one. In other words, as we have noted, the Excluded-Middle Principle loses part of its sting. A small group of mathematicians, the intuitionists, deny the Excluded-Middle Principle altogether. They would discard statements like "Either there is a string of 18 consecutive 5s somewhere in the decimal expansion of  $\pi$  or there is not", since they can most likely enjoy no proof in our finite world. That is to say, 'truth' is intimately linked to provability. For quite different reasons, a handful of quantum theorists also reject the Excluded-Middle. In fact, John von Neumann pioneered an alternate 'logic', 'quantum logic', especially tailored to the needs of quantum phenomena. Following the general implications of quantum theory and quantum logic, a sign's becoming a genuine sign depends upon the interpreter's interaction with it. Just as no 'wave packet' is an actualized 'particle-event' until it enters into relationship with some aspect of its surroundings, so also no sign is a full-blown sign until it has been actualized (and interpreted) by some interpreter in some respect or capacity (Fraassen 1974; Heelan 1974).

An additional example may serve to illustrate the idea that: (1) a sign is not a genuine sign until it has interacted with some semiotic agent, (2) within the (vague) realm of all possible signs, inconsistency or contradiction inevitably prevails, and (3) given the range of all (general) signs, past, present, and future, there is no guarantee that the Excluded-Middle applies, hence the meaning of any and all signs will be incomplete. For example, assuming I have little knowledge regarding a particular event reported in the newspaper, I can read each individual sentence with rather wide-eyed, innocent — and exceedingly vague — belief. Yet at a more general level I may also believe that this article, like all others, is in all probability the victim of at least some degree of biased reporting. I tend to believe each individual sentence as it stands, but at the same time I am willing to concede to the possibility that my belief in a given sentence can embrace contradiction, since I also believe that, lurking somewhere in the report, there is undoubtedly some distortion of the 'truth'. So I take the article as a whole with a grain of disbelief, though I have not

yet encountered any sign of deceit: it remains as a sign of possibility. Even though I might not have been able to catch the reporter at her devious game, I may still retain my faith that a closer reading will in all likelihood reveal some sort of inconsistency (i.e. that the sign of possibility will be actualized). In other words, I believe the article is neither wholly 'true' nor wholly 'false', but somewhere in between (we once again realize that banishing any and all contradictions and paradoxes is an interminable and hence futile enterprise). Extrapolating from Peirce, it follows that, as has been summarily intimated above: (1) an assertion of possibility (Firstness), having found newborn freedom from the Principle of Noncontradiction, rests chiefly within the domain of vagueness; (2) an assertion of necessity (Thirdness), liberated from the fetters of the Excluded-Middle Principle, pertains primarily to generality; and (3) an assertion of actuality (Secondness) by and large, and for practical purposes, remains by and large obedient to the demands of classical logic.

This collusion of vagueness and generality constitutes a fundamental principle of what Peirce envisioned for his 'logic in the broadest possible sense'. According to the tenets of classical logic, once the identity of a proposition has been determined, it is either 'true' or 'false'. But for Peirce's more general 'logic', as long as a proposition remains indeterminate — which must always be the case to a greater or lesser degree — it is not necessarily 'true' that it is either 'true' or 'false'. In fact, it may also be neither 'true' nor 'false', for some newly born 'truth' may exist somewhere between the erstwhile horns of the presumed extremes of 'truth' and 'falsity'. And until the proposition is an absolutely determinate actuality — which will never be the case in a finite setting of fallible semiotic agents — it may be 'true', given its vast range of all possible determinations at diverse timespace contexts, that it is both 'true' and 'false'. Peirce's 'logic', it tentatively appears, reflects a tension and potential mediation between vagueness and generality, the individual and the universal, and discontinuity and continuity. This accounts for the elusiveness of his hopeful 'logic', and his obvious difficulty in bringing it to fruition.<sup>6</sup>

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<sup>6</sup> Peirce's 'logic' also endows the terms in question with a flavor somewhat reminiscent of Niels Bohr's *complementarity* regarding the wave/particle duality, of Werner Heisenberg's *uncertainty*, which, he argued repeatedly, is more a

### Filling in a few more gaps

The underdeterminationist assumption has it that, intuitively, we believe something but not everything is 'real'. Since we cannot by empirical means discover what is 'real' without a shadow of a doubt, the matter is left to our judgment, according to our persuasions and propensities and wishes and whims. Underdetermination implies that what is taken as 'real' could always have been construed otherwise, and what is 'unreal' may yet stand some outside chance of becoming 'real' at another time and another place. Underdetermination regarding scientific theories also stipulates that competing and equally legitimate theories — equally legitimate from within their particular conceptual schemes, that is — can be generated on the basis of the same set of observations.<sup>7</sup>

Quine (1969) argues that a theoretical sentence in physics can have the same underdetermined relation to experiments and observation sentences that a sentence of natural language has to the observed objects, acts, and events that it is about (Vuillemin 1986). He writes that since experience is never an infallible adjudicator for rejecting or embracing individual theoretical sentences, theoretical physics cannot be other than an interconnected web of sentences, procedures, and formalisms in contact with the world only at its edges, if at all. Any impact observation sentences may have on the web becomes distributed throughout the web such that no part of it is immune to change, and no part stands alone in bearing the brunt of that impact. Additions, deletions, and adjustments of diverse sorts can often be made in the whole to accommodate the experience, but there is no infallible or unique method for making these adjustments. Four naturally occurring elements or many of them, phlogiston or oxygen, Euclidean geometry or Riemannian or Lobachevskyan geometry,

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methodological and epistemological than an ontological necessity, and of Gödel's *incompleteness-inconsistency* (Merrell 2000).

<sup>7</sup> In this vein, at the turn of the century, Pierre Duhem (1954) and Henri Poincaré (1958), and more recently, Nancy Cartwright (1983) and Hilary Putnam (1983), argue that there will always be equally satisfactory alternatives to a given theory or general theoretical framework. Consequently, no single story can account for all the furniture of the world in one fell-swoop. This is, in essence, the Duhem-Quine scenario — in which Peirce is a principle actor, though his role in this respect is often overlooked — predicated on the radical underdetermination of theories (i.e. they are empirically equivalent but logically incompatible) (see also Gähde and Stegmüller 1986, Roth 1987, Sacks 1989).

Darwinian or Lamarckian evolution, all during certain periods, have been aided and abetted by proper 'empirical' or at least 'intuitive evidence' from one perspective or another. According to the dictates of a community's desires, what now appear to us as the most bizarre of theories could be, and at times have been, granted 'truth value'. And when fads, fashions, and tastes have suffered from the introduction of alternatives, theories have either followed suit, or they have served as stimuli for the most likely candidates from among those alternatives.

Given the nature of underdetermination, it is often possible to embrace logically incompatible but empirically equivalent theories — albeit at different times and in different places. As a consequence, competing and mutually exclusive theories may always be available to account for the observational data at hand. Arguments for determining absolute 'Truth' are thus rejected: we can at best only know what we (think we) know, for we can't know whether what we know is infallibly 'true'. That is, by Peircean refutation or Popperian (1963) falsification, we can't know that what we know is *not* 'false'. So the dominoes are set up only to be knocked down. Yet the hope persists that to all questions an answer can eventually be found; otherwise there would hardly be any motivation for continuing to play the game of inquiry. In other words, thought can potentially cure all ills, though when put into signs for communication with other semiotic agents, it often threatens to become undecidable.

It would appear that our ideals are perpetually out of line with our real capacities. Such is the general nature of Peirce's doctrine of *fallibilism*. Thus we see with greater force that overdetermination and underdetermination apply to the very idea of fictionality, and especially to the inexorable fuzziness between fictions and the 'semiotically real'. The exact quantity of gold in Pike's peak, the cause of Hamlet's dementia, Napoleon's reason for his decision at the Battle of Waterloo, Don Quixote's height, the use of  $\sqrt{-1}$  in quantum theoretical equations, the absolutely precise nature of the sun with respect to all other entities in the firmament, are all underdetermined in that they are never so complete as to be immune to further determination. Consequently, a community's fabric of signs is read into experience, and in the process it becomes the *world that is*, the 'semiotically real'. 'Semiotically real' signs from diverse time periods and from a variety of belief that are pregnant with meaning ('mass', 'energy', 'Eucha-

rist', 'Big Foot', 'Zeus', 'UFOs', 'mana', 'witches', 'AIDS', 'cholesterol', and the 'Cross' and 'Swastika') have become excessively impregnated because of the role they play and the place they occupy in their respective interwoven *semiotic* fabric. They do not describe experience; they are 'intersubjective idealizations', whether dressed in relatively concise and complete abstract language or in everyday language and enshrouded in vagueness, thus much of their meaning remains implicit.

After all has been said and done, the *overdetermination* (*vagueness*) — *underdetermination* (*incompleteness*) pair of terms is itself perhaps most economically viewed as two *complementary approaches* toward knowing what *is* (see especially CP: 2.322–23). The two approaches pattern the Heraclitus-Parmenides and Aristotle-Plato antagonisms. In their purest form, one is messy and unkempt; the other is orderly. One is rich in the variety of its concrete particulars; the other is formal and parsimonious. The one is a maze of tropical flora; the other is a barren desert converted into a grid of meticulously cultivated plots. But there must be more: the *Included-Middle* emerging from within the pairs of terms, evincing *inconsistencies* here and there, keeping the *complementarities* together, in spite of whatever tensions might arise. So, we cope with our unruly signs, as best we can, and get on with life's processes. This is to suggest that *semiosis*, which is continuous process rather than finished, relatively fixed product, cannot but be construed as the possibility for *pluralist semiotics*.

Let us now take up Peirce's categories insofar as they bear on his concept of the sign.

### The categories, and the sign: toward the pluralist concept

To recap, Firstness is possibility, what might become; Secondness is actuality, what has become or presumably is; and Thirdness is the likelihood or probability that what has become is in the process of becoming something other than what it was becoming due to the prevailing conditions. Metaphorically speaking, Firstness is position, stasis; Secondness is velocity, change; Thirdness is acceleration, change of change.

Figure 1 gives us an impression of Thirdness as mediating Firstness and Secondness and bringing them *interdependently, inter-*

relatedly and interactively together in the same way that it comes into interdependent, interrelated interaction with each of them (the italicized terms — hereafter specified as *i-i-i* — are not Peircean in origin; nevertheless I believe the way I use them in this essay is in the spirit of Peirce [see Merrell 2000, 2003, 2004]). I use a ‘tripodic’ model of the ‘processual’ interrelationship between the categories: ‘processual’ because the lines of interconnection are always flowing and becoming something other than what they were becoming.

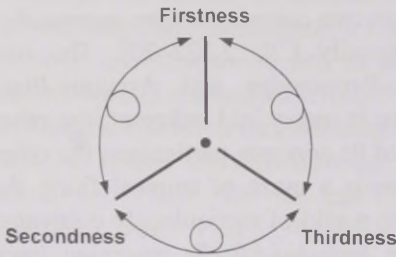


Figure 1. Thirdness as mediating Firstness and Secondness and bringing them interdependently, interrelatedly and interactively together, coming thus into interdependent, interrelated interaction with each of them.

This *semiotic* flow also qualifies Peirce’s sign components, which are most adequately presented in tripodic form (see Fig. 2). Since the interpretant brings the representamen and semiotic object into *i-i-i* in the same way it comes into *i-i-i* with them, the tripod is in a manner of speaking ‘democratic’. All three legs are necessary. Remove any one of them and the tripod falls. The representamen and semiotic object without an interpretant are disconnected; the interpretant without a representamen and a semiotic object is of no consequence.

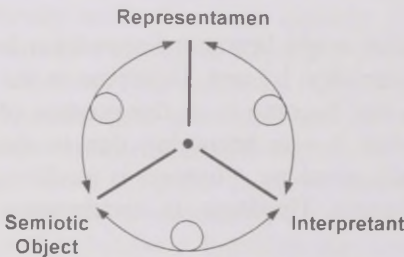


Figure 2. Peirce’s sign components in tripodic form.



A disconnected representamen, as Firstness, is no more than an 'autonomous atom'. Unless it interrelates with something other than what it is — some 'semiotic object' — it cannot become a genuine sign. A 'semiotic object', or Secondness, without the Firstness of the sign, also simply *is* what it *is*, and no more. In other words, a semiotic 'object' of Secondness cannot become a genuine sign without a representamen with which it can interrelate. Thirdness plays the role of bringing the representamen and semiotic object, Firstness and Secondness, into *i-i-i*-, and at the same time it brings itself into *i-i-i*- with them. But neither can the interpretant, in and of itself, become a genuine sign.

This triadic process can be summarized as follows:

- A. Firstness as representamen implies a set of possible instantiations of Secondness as 'semiotic objects' and their possible interpretants. A First can emerge within different timespace contexts. This is to say that within a given timespace context, a possibility can emerge in coherence with other possibilities, and within another timespace context, a contradictory possibility can emerge, but both the possibility and its contradictions cannot emerge within the same timespace context — this characteristic entails genuine *complementary interrelations*. Hence the classical logical Principle of Non-Contradiction does not hold within the overdetermined sphere of Firstness, or sign possibilities.
- B. Secondness is a possibility that has emerged as a semiotic object in *i-i-i*- with its respective representamen as Firstness. A Second entails what is taken as 'real', and as 'real', ordinarily it cannot be anything other than what it *is*. It is either what it *is* or it *is not* what it *is*; but it *is* what it is taken *to be*, therefore it presumably cannot be anything else. Hence the classical Principles of Identity, Non-Contradiction, and Excluded-Middle usually apply to Secondness insofar as what is a Second is perceived and conceived according to the social conventions that are collectively accepted by the community of sign makers and takers.
- C. Thirdness is the likelihood that a semiotic object will come into *i-i-i*- with a given representamen according to some set of conventions. This is due to the mediary effective of an interpretant that brings about the emergence of meaning of the sign. The act of mediation occurs in time, which is to imply that successive timespace contexts come to bear on the process of *i-i-i*- between

Firstness, Secondness, and Thirdness, and representamen, 'semiotic object', and interpretant. Time, with respect to Thirdness, accompanies change, and change introduces unpredictability regarding future timespace contexts. Thus, whatever possibility of Firstness (a representamen) might have emerged to come into *i-i-i* with some possibility of Secondness (a 'semiotic object') mediated by some possibility of Thirdness (an interpretant), at some later moment the conditions might have changed such that other alternate, and conceivably more viable possibilities can emerge, even though they may be incompatible with the possibility that preceded them. Consequently the classical Principle of Excluded-Middle does not necessarily apply within the underdetermined sphere of Thirdness.

How to cope with Peirce's apparently outlandish claims about the Principles of Non-Contradiction and Excluded-Middle? Perhaps by beginning with the question ...

### **What, in the final analysis, happened to classical logical principles?**

A Peircean example of a *general* statement or proposition might be: (1) 'All swans are white'. It seems quite unproblematic, and to take it as neither true nor false would certainly seem counter-intuitive. An example of *vagueness* can be: (2) 'I could say something about George Bush'. What the speaker could say might be both one statement and another contrasting statement, and it might be interpreted in both one way and another way, depending on the interpreter.

Validation of (1) depends on the sign taker's past experience and potential future experience of the whiteness or nonwhiteness of all swans. In this event there exists the possibility, however remote, that it is neither the case that all swans are white nor that no swans are white, but rather most swans might be white with the exception of a few swans, that happen to be black. Determination of (2) depends on the sign maker's further specification of what she might say. If she says 'Bush is a moron', the statement could be taken as true by some sign takers and false by others. So it might be said that the as yet unactualized sign is still both true and false, given the timespace context of its interpretation. If it is taken as both true and false within the same

timespace context it is nothing at all; in other words, it cannot be more than a possibility of either the one or the other of the two signs (for further on this topic, see Margolis 1991: 40–53, Lane 1999, Merrell 2007, and Peirce *CP*: 5.447, 1.434, 2.598, *MS* 611, 6.168).

We have, then, at one pole, general signs of chiefly Thirdness that are not necessarily determinable by the Principle of Excluded-Middles, and at the other pole, vague signs of chiefly Firstness that are not necessarily accountable to the Principle of Non-Contradiction. Where's the security in all this? By and large in the middle, where signs *chiefly of Secondness* play their key role. These signs, as we make and take them according to our habituated ways and our social conventions, lend themselves to *either/or* alternatives, hence when on their best of behavior they abide by Identity, Non-Contradiction, and Excluded-Middles. A sign saturated with vagueness entails the possibility of an interpretant; a sign in the most general sense is a sign whose interpretant can be up for reform or rejection; a sign of *either/or* alternatives is a sign taken in terms of its truth/false values, however tenuous those values may be.

It would seem that our signs, in their composite form, are more complex than we would perhaps wish to admit. This assumption cries out for a closer look.

Hempel's 'Inductivity Paradox':  
substantive or existential anxiety

Carl Hempel (1945) argues that sentences in the order of 'All swans are white' can be restated as 'All nonwhite things are nonswans'. How so? Actually, the two hypotheses have the same content; they are different formulations of the same proposition. In order to demonstrate this, Hempel posits what he calls the *equivalence condition* between the two hypotheses: whatever confirms (or refutes) one of the two equivalent sentences, also confirms (or refutes) the other.

In other words, one hypothesis is a *contrapositive* of the other hypothesis. To state 'That swan is white, therefore all swans must be white' also confirms the statement 'That bear is a nonswan and it is nonwhite, therefore all nonwhite things must be nonswans'. Of course 'All nonwhite things are nonswans' is the much easier of the two hypotheses to test. Pink flamingos, red cardinals, gray doves, yellow

canaries, and blue jays, all confirm the contrapositive version of the hypothesis, as do yellow lemons, silver coins, red herrings, and green emeralds. So we can go through life, at each step spying either white swans or nonwhite nonswans, and our original hypothesis asserting that all swans are white will not yet be absolutely confirmed, for something will always remain to be observed, including species of insects in the Amazon basin becoming extinct daily. (And, true to form, Captain Cook once discovered some black swans while exploring Australia, thus confirming the statement 'Most swans are white, but some are black, namely a strain of swans that can be found down under'. So now we know, at least until somebody might happen to run onto a nonwhite-nonblack swan, somewhere and sometime.)

Here, then, we have a prime example of a general sign further specification of which depends on us, the sign takers. In spite of Hempel's 'inductivity paradox', we usually do what we do best, and get on with it. We send and take, and engender and translate signs, and we cut the world up as we go along. We compare new experiences to old ones, and pack signs into the pigeon-holes with which we have become comfortable, notwithstanding the risk we constantly run in view of the assumption that what is correct from one vantage may be absurd from another. However, during life's processes within that culture, every item of experience that happens to pop up might possibly bring us to an awareness of the underdetermination of our signs, and of the incompleteness of our semiotic world. Given Hempel's paradox regarding the inexorable incompleteness of our inductively derived generalities, how can we hope to avoid pluralism?

As if Hempel weren't enough, there's more to come.

#### Goodman's 'New Riddle of Induction': qualifying the anxiety

Goodman's (1965) 'New Riddle of Induction' goes like this. We would like to believe that the statement 'Emeralds are green' is beyond doubt true. Supposing that all the emeralds we have examined before a given time are 'Green', we are quite confident that 'Emeralds are green' will always be confirmed, for according to our observations, emerald *a* on examination was 'Green', emerald *b* was 'Green', and so on.

But suppose we meet someone from Netherworld whose perception of things is out of sync with ours. Among other oddities, Netherworlder's language contains the following two terms which we, after a few hits and misses, learned to translate into our language thus:

Grue	= examined before the temporal 'reference point' $t_0$ and is reported to be 'green' or is not examined before $t_0$ and reported to be 'blue'. ( $t_0$ is apparently an otherwise arbitrary moment of time that is not in the past.)
Bleen	= examined before the temporal 'reference point' $t_0$ and is reported to be 'blue' or not examined before $t_0$ and is reported to be 'green'.

Before time  $t_0$  our statements assert an emerald is 'Green', but Netherworlder has a parallel statement asserting it is 'Grue'. And as far as she is concerned, her observations that emerald *a* on examination is 'Grue', that emerald *b* is 'Grue', and so on, adequately confirm her own hypothesis. It will obviously appear to us from the standpoint of our language and our color taxonomy that Netherworlder's sensory images change radically after  $t_0$ . But actually, from her perspective, the glove is turned inside out: as far as she can tell, it is our taxonomy that is time-dependent. That is, Netherworlder's translation of our color scheme would result in the following report:

Green	= examined before $t_0$ and is reported to be 'grue', or not and is reported to be 'bleen'.
Blue	= examined before $t_0$ and is reported to be 'bleen', or is not and is reported to be 'grue'.

From the perspective of each translator, the other's inductive process is false. Apparently, there is no possible resonance with respect to 'Green' and 'Grue'. However, if the two perspectives are taken together as an atemporal whole, they are symmetrical; but when taken separately as self-sufficient wholes, they are asymmetrical with respect to one another (Gärdenfors 1994; Rescher 1978). In a manner of speaking, we and Netherworlder possess our own Jacques Derrida 'metaphysics of presence' with respect to other's conception of the

world, though, from the other's complementary world, this 'metaphysics of presence' is easily demythified (Hesse 1969).

In short, Netherworld and Ourworld are two, and they are both consistent enough from within the purview of Netherworlders and Ourworlders, respectively; yet they appear incompatible; and yet,... if we can at least partly understand Netherworld, and if Netherworlder can at least partly understand Ourworld, then the two worlds can't be entirely incommensurable. Both have been drawn from the sphere of all possible worlds: The World.

Hempel's paradox tells us that surprises are inevitable somewhere along the road. These surprises entail differences that make a difference, some of them earthshaking, revealing that our world is something other than we thought it was, and letting us know that virtually nothing is absolutely fixed. Goodman's dilemma tells us that different individuals from the same culture, and most strikingly, individuals from different cultures, can throw a monkey wrench in our conventions (presuppositions, predispositions, prejudices), such that we either ignore other ways of taking our world version and other world versions in general. The two problems suggest: (1) the inevitable complexity of our particular world version, here and now, when considered in view of all possible world versions, and (2) the inevitability of our confronting multiplicity during every step, whether we are talking about abstract ideas and concepts or walking along life's swerving, sinuous path.

Another score for pluralism. But enough imaginary constructs; let's return to real life situations within the concrete world.

### **Alien culture anxiety**

We can't seem to break entirely free from imagination — we're always in some form or other in tune with that sphere of possible worlds, by way of Firstness. In this vein, the story I have in mind entails an imaginary construct in the most radical sense.

Bizarre though it might seem, my story, including the Patron Saint of Mexico, the Virgin of Guadalupe, exemplifies a combination of Hempel's paradox and Goodman's riddle. In 1531, ten years after the Aztec nation had been subdued by the Spaniards, the Virgin Mary purportedly appeared before Juan Diego — an Amerindian originally

brought up in the tradition of the Indigenous people's own Virgin Goddess, Tonantzín. The Mexican Catholic Virgin eventually became known as 'Guadalupe'. The Catholic fathers appropriately distinguished between 'Guadalupe' and the Aztec goddess, 'Tonantzín', before  $t_0$ , and after  $t_0$ , such distinction remained in force. As far as the good fathers were concerned, Guadalupe was, and would always be, an exclusively Catholic image.

Such clarity and distinction, however, simply doesn't hold as far as human cultures go: they involve flowing, fluctuating *i-i-i*- phenomena as described above. The Amerindians' cultural experiences serve to bear this out. The Amerindians' image presented a countenance of *conformity* to the Catholic tradition that usually pleased the Spaniards, for sure. But underneath this countenance, the Amerindians nurtured vestiges of their traditional beliefs, and thus *resisted* the Guadalupe image thrust upon them by the Spaniards. And how were their traditional beliefs manifested? By combining their cherished 'Tonantzín' with 'Guadalupe' — in paradoxical Goodmanesque fashion — to create the image of 'Guadantzín' (or 'Tonalupe', depending upon the emphasis), a transformed Aztec image in lieu of the Catholic image. That is to say, the two images, 'Guadalupe' and 'Tonantzín' were fused, confused, and hybridized, such that something new emerged from within the erstwhile Excluded-Middle.<sup>8</sup>

Now, since, *pace* Goodman's 'paradox', what is experienced as 'true' at one time may be experienced as 'false' at another time, given the perspective, we obviously need some provision in order to account for change and time. Time-dependent considerations of 'truth', of course, go against the grain of much modern logic. Peirce, however, believed logic to be a normative practice, and hence time-bound. How can we apply Peirce's vagueness to the concrete life situation involving conquerors and conquered in Mexico?

Let us consider concrete experience of the world's objects. At a particular point in time, experience of some of these objects can become ambiguous, or even anomalous: for instance, Ludwig Wittgenstein's (1953) allusion to the 'Rabbit/Duck' ambiguity. Suppose

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<sup>8</sup> Admittedly, I summarize this story to the extreme, which is necessary given the limitations of this essay. For the entire account from a plurality of views, see Brading (1985, 1988, 2001), Castillo (1996), Elizondo (1997), Glantz (1995), Lafaye (1976), Maza (1953), Nebel (1995), Pallares (1981), Rodríguez (1994), Siller, Glodomiro (1989).

someone observes a dozen times that the Wittgensteinian form is a 'Rabbit'. Then, in a distinct context, or perhaps not, a radical perceptual switch might occur such that the drawing is suddenly reported as a 'Duck', and with this thirteenth observation its ambiguous nature finally becomes apparent to the observer. With respect to Wittgenstein's 'Rabbit/Duck', suppose Netherworlder has the following set of signs:

Dabbit	=	examined before $t_0$ (which is arbitrary) and reported to be a 'Rabbit', or not so examined and reported to be a 'Duck'.
Ruck	=	examined before $t_0$ and reported to be a 'Duck', or not so examined and reported to be a 'Rabbit'.

Assume somebody from Ourworld is capable of seeing the drawing only as a 'Rabbit' — in other words, he is not cognizant of the drawing's ambiguity. Netherworlder, in contrast, sees the drawing as one thing — which is the equivalent of Ourworlder's 'Rabbit' — prior to a particular moment. Then, after that moment, she reports it as something else entirely — the equivalent of what would be Ourworlder's 'Duck', were she able to see it in the drawing.

Netherworlder would obviously be as far as Ourworlder is concerned rather naive and whimsical, changing her mind, signs, and perception apparently at the drop of a hat. Naturally, of course, Netherworlder believes this is not the case at all. She merely perceived something as what was for Ourworlder something else at a given time, and in so doing attained what is for Ourworlder an alternate (that is, a nutty) level of awareness, and that's that. The important issue is, however, that the so-called alternate level of awareness must be for Netherworlder irreversible (discounting memory loss, of course). The time at which phenomena are observed, then, can determine 'truth-value' and meaning with respect to those phenomena. What is considered 'true' at a particular time depends upon expectations derived from memory of previous experiences. However, when those expectations are not satisfied, discovery of a new form of 'truth' and meaning — and of ambiguity in the 'Rabbit/Duck' case — is potentially forthcoming (for further along these lines see Merrell 2004).

This, I would respectfully submit, is the process our Indigenous people from the Valley of Mexico were caught up in. The Spaniards



continued to distinguish between Guadalupe and Tonantzín; the Amerindians fused them to create an image hitherto unknown, Guadantzín (or Tonalupe) after  $t_0$ . The Spaniards' world conformed to their bivalent categories, and the twain between must never meet; the Amerindians brought forth a new sign from within the Guadalupe/Tonantzín pair of terms, thus violating the Excluded-Middle imperative. But their image, Guadantzín (or Tonalupe) could have been for them, after  $t_0$ , as clear and distinct an image, and as distinguishable from either Guadalupe or Tonantzín, as was the Spaniards' pair of images, one sacred and the other heretical. The very fundamental nature of this *semiotic* process is that now there were three images, and potentially four different terms, rather than the original two.

Signs grow, and in so doing they breed complexity, a complexity bearing witness to a pluralism of worlds.<sup>9</sup> Let us hold the Guadalupe–Tonantzín–Guadantzín story in abeyance, while we look at some further implications for cultural semiotic processes

#### Logical principles, and conundrums of deductivity

Problems at the core of classical thought now loom large. Eventually, the bivalent model of classical logic threatens to fall in a heap, for *inconsistency* and *contradiction* eventually raise what the well-groomed logician considers their ugly heads. As *inconsistent*, a given translation — or body of knowledge as it were — shows itself to be *overdetermined*, for a host of possible alternate translations are always somewhere, as semiotic possibilities, ready and waiting to replace whatever translation happens to be in the public eye within a given spacetime context. In other words, from within a given horizon, *local consistency* may seem to rule. But at the *global* level, when any and all cultural horizons, possible and actual, are ushered onto the scene, *inconsistency* inevitably becomes immanent at some point or other.

<sup>9</sup> In a comparable vein, Terry Eagleton (1996) writes that postmodernism is “a style of thought which is suspicious of classical notions of truth, reason, identity and objectivity, of the idea of universal progress or emancipation or single frameworks, grand narratives or ultimate grounds of explanation” (viii), and that against the Enlightenment ideals, postmodernism “sees the world as contingent, ungrounded, diverse, unstable, indeterminate, a set of disunified cultures or interpretations which breed a degree of skepticism about the objectivity of truth, history and norms, the givenness of nature and the coherence of identities” (vii).

Absolutely clear and distinct translations, from one horizon to another, from one language to another, from one theory to another, or in science from observation sentences regarding perceived phenomena to theoretical statements, are generally considered to become, as we shall note below, difficult, and at times well-nigh impossible. It is as if one culture and its respective language roughly had meaning<sub>1</sub> for a given word, while another culture roughly had meaning<sub>2</sub> for what appears to be the equivalent word. Yet the two meanings are radically at odds. How many cultures and languages and meanings can there be anyway? Many, virtually uncountable many, pluralistically many. How can meanings in one language be mapped onto meanings from another culture? They can't, at least in a Cartesian clear and distinct manner. The upshot is that any and all translations are inevitably *incomplete*, and *underdetermination* rules, for within some timespace context some alternate translation will emerge into the light of day that will be deemed more adequate and hence it will replace the translation that was previously given a favorable nod. Each translation is a generality regarding the target text, and as a generality, *incompleteness* always inheres.

Disconcerting, all this. It reminds us once again of Gödel's unexpected and often unwanted *incompleteness theorems*. To make matters worse, in 1936 Alan Turing demonstrated that there is no mechanical procedure that can decide in advance if a computer program will be capable of a given task or not; if it will 'halt' or not. And yet,...

The problem complexifies even further: toward radical pluralism

In the 1950s Gregory Chaitin convinced a growing number of physicists, mathematicians, and logicians that not only was David Hilbert just a little bit wrong — in his contention that a finite set of axioms could be written capable of accounting for the whole of mathematics. It's actually much worse than Hilbert ever imagined. There are extreme cases, namely regarding the matter of randomness, where the idea of mathematical truth has no structure at all, where it's completely unknowable, where it's merely accidental, where mathematical truths are no more than a coin toss, where they are true by accident for no apparent reason.

Chaitin himself tells us that Gödel surprised us with purely formal incompleteness, and with Turing incompleteness took a turn to concrete mechanical issues, but with his — Chaitin's — work, given the infiniteness of any and all possibilities when considering the totality of all possible programs, randomness and pure chance inhere, and wherever we turn we smash against a brick wall because incompleteness hits us in the face (Chaitin 2001).

What we have in terms of this expulsion from the inductivity and deductivity paradises, given the work of Hempel, Goodman, Gödel, Turing, Chaitin — and many others too numerous to discuss here — is enough to put a scare in the most stalwart mathematicians and scientists. Inductivity allows for an uncountable number of world versions, each of which, *locally* speaking, can be either true or false, according to the eye of the beholder. But by putting a collection of world versions into the same mix, we inevitably end up with more than merely a few inconsistencies here and there. Deductivity allows for what appear to be clean and consistent premises, methods and strategies. But within some unforeseen timespace context, some alternative to the commonly accepted system of thought and perspectives will pop up and throw us into turmoil, for this new system appears superior to the old one. Taking all systems of thought and mind into account, past, present, and whatever might emerge in the future, we must concede that, *globally* speaking, the truth lies in neither the one nor the other system of which we have some modicum of knowledge, but in some other system awareness of which we do not yet enjoy.

### **And yet,... and yet,... should we really fret over it?**

In fact, if we conflate the above words on Peirce with the problems of induction and deduction, it might appear that we are going from the frying pan to the fire.<sup>10</sup> But are we really? Let us construct and contemplate something in the order of Figure 3.

“Why complicate the issue?” comes the immediate protest. I would contend that the issue is indeed complex, and to reduce it to simplicity brings on other complications the likes of which we have haven't yet

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<sup>10</sup> Actually, Peirce has a third term, *abduction*, which corresponds to Firstness, while abductivity pertains to Secondness and deductivity to Thirdness (see Queiroz, Merrell 2005).

seen and would rather not see. Actually, Figure 3 affords us an image of the processual — and hence Peircean — nature of *homogeny*, *hierogeny* (*autogeny* in conjunction with *hegemony*), and *heterogeny*. I end these terms with the suffix ‘-geny’, since, of the same root as *gene*, it elicits the image of *genesis*, *organicity*, and *process*, and it falls in line with the processual nature of *semiosis*. I use the prefixes, ‘homo-’, ‘hiero-’, and ‘hetero-’, respectively, as: (1) ‘same’, ‘like’, or ‘analogous to’, (2) ‘positioned or ranked’, with priority given to one term over the other one, and (3) ‘different’, ‘dissimilar’, ‘diverse’.

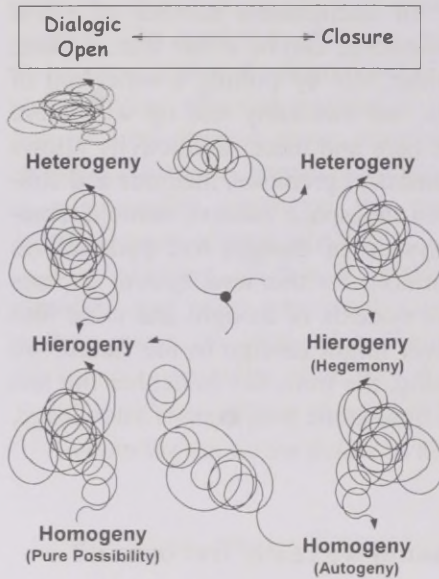


Figure 3. Processual nature of homogeny, hierogeny and heterogeny.

On the right side of Figure 3 we have *dialogic openness* and on the left side *closure*. In the center we have the swirling, swiveling legs of the Peircean semiotic tripod. From the bottom left to the top we have possible passages, that can be either two-way or one-way, depending on the circumstances, and the same condition exists along the right side. At the upper portion of the diagram we have one-way passage from openness toward closedness, and at the lower portion we have a possible passage upward toward the left side.

So, what's the figure all about? The emergence of somethingness from the sphere of pure possibilities at the lower left to somethingness in the center to successive differentiation at the upper left. Something emerges out of homogeny, as a First. This is left-side homogeny, as pure possibility, capable of holding possible signs and their contraries, complementarities, and contradictories together as unruly but complacent bedfellows. Obviously, the Principle of Non-Contradiction has no place in this rippling, effervescent sea of apparently chaotic options there and waiting their chance to be selected and chosen to emerge as candidates for signhood. And in the process something *is* emerging, into hierogeny. Then, we label it as *either* one thing *or* something else, as a Second. As a Second, it has been duly classified *as* something or other *rather than* something else, which it might have been, had the conditions been otherwise, hence it becomes a Third. (For example, a Ptolemaic scientist would label the 'Earth' the center of the universe, while for his Copernican counterpart that label would belong to the 'Sun', and today's scientist would attach the label to something else entirely.) Within Thirdness, we become aware of the subtle variations by which this Second is differentiated from all other Seconds in its category and from all Seconds within other categories. (The Ptolemaic true-believer *knew* the 'Earth' is the center of the universe *because* of such-and-such a set of premises and their conclusions; the Copernican would have a different and contradictory set of premises and conclusion; for the contemporary scientist the nature of the universe is something altogether different.) Since Thirdness has entered into the light of day, everything is out in the open, and subject to subtle and occasionally to radical changes, given their nature as Thirds.

And all of us, within our culturally embedded contexts, usually manage to get along. In fact, we might get along so well that we tacitly assume the way we perceive and conceive and label our world is clearly and distinctly the way the world *is*. This is to say that we are now in the process of closing the doors to novelty, to creativity, at the right-side of Figure 3. Consequently, heterogeny becomes fixed; programmatic hierogeny becomes hegemony — and may the 'best man' win; that is, homogeny is on the road toward becoming autogeny — our thought and perceptual and conceptual patterns and actions are becoming virtually fixed. Now, only by a radical change of heart and mind — a 'paradigm switch' if you will — some iconoclastic and enterprising soul might be able to take a strong swim against the

current, enter into the light of day once again, and experience dialogic openness by taking that wild ride from right-side homogeneity to left-side hierogeneity.

### Fret over it or not, this is our condition

Now consider Figure 4, since it can illustrate what I have in mind better than I can say it. Homogeneity left, *overdetermined* and of *utter vagueness*, is what 'might become', within some timespace context. Hierogeneity left consists of what *is* what it *is*, or at least so it appears to us. It makes up *our world*, the world we have come to know and with which we are familiar. It is the world we've made; we've made it as much as we've found it; it is invented and fashioned rather than merely discovered and explored as if it were something 'out there' for our taking.

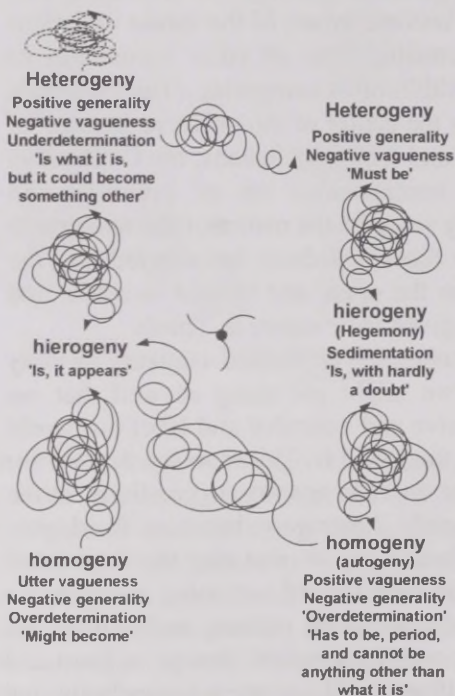


Figure 4. Positive and negative generality, positive and negative vagueness, underdetermination, overdetermination and 'overdetermination' in the processual model of homogeneity, hierogeneity and heterogeneity.

Heterogeny left is *underdetermined positive generality*, where one takes what one thinks *is* as it *is*, with acknowledgment that at any moment it could be in the process of becoming something other than what it was becoming. It is of *positive generality* insofar as there is such awareness that the world could be other than what within our particular timespace conjunction we take it to be. It is also of *negative vagueness*, since under ordinary circumstances we tend to embrace our set of conceptual categories or generalities and conveniently ignore the inevitable tinge of vagueness and ambiguity, or fuzziness, in all our conceptual schemes. And we improvise, at least until our fallibilism catches up with us and we begin looking for some alternative to what has become a glitch in our knowing. *Heterogeny*, *hierogeny*, and *homogeny* right depict progressive fixity of the left-side processes, as described above. Since our overriding tendency, within our community, is to assume we are more right than wrong, and if we encounter few instances that would lead us to believe otherwise, our knowing and our travels through the pathways of our everyday living become increasingly entrenched, sedimented, stabilized. Thus we begin gravitating toward hegemony-right. There, *negative generality* resides alongside *positive vagueness*. *Negative generality* is that which is *merely potential*, and *positive vagueness* is that which would otherwise be *vague*. But since *negative generality* is the *merely potential* that due to sedimented, entrenched, habituated action and reaction has become mindlessly perceived and conceived as *the world that is*, within that world, what is 'overdeterminately' actualized from Firstness is taken as static, permanent — and *processual becoming* remains frozen.<sup>11</sup>

In sum, homogeny-left is overdetermined, and populated with inconsistencies, given its nature as utter vagueness. Hierogeny-left is the sphere of bivalence, wherein Identity, Non-Contradiction, and Excluded-Middle find themselves in congenial company. Heterogeny-left is underdetermined and perpetually incomplete. On the opposite side of Figure 4, homogeny is 'overdetermined', which, unlike *overdetermination* on the left-side, is not a question of virtually unlimited

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<sup>11</sup> According to the premises underlying Figure 4, and in view of my suggestion in footnote 3, 'overdetermination' must be distinguished from *overdetermination*. The former is comparable to Freud's use of the term; it is the product of compulsion. The later, in contrast, offers relatively free-wheeling possibilities of choice according to the timespace conditions that might happen to inhere.

possibilities within a diversity of timespace contexts at all, but rather, it is hard-driven by a compulsion to jam-pack everything into a set of fixed categories of thought and action-reaction. Thus what is actualized, hierogenized, is what *is*, with nary a shadow of a doubt. What might have been openness along the left-side has become closure on the right-side.

In view of Figure 4's nature of *i-i-i*-, Sandra Rosenthal (1994) effectively argues for Peirce's concept of *vagueness* and *possibility* as *vagueness of positive possibility* and *vagueness of negative possibility*. *Negative possibility* is Firstness in the most *general* sense: left-side Firstness containing all possibilities at all possible times and places, the vast majority of which lie outside critical common-sensism at a particular time and place (the Aztecs' initial confrontation with Guadalupe). *Positive possibility* is Firstness in the vaguest sense: right-side Firstness limited to tunnel-minded thinking that disallows alternatives other than those permitted by sedimented ways and means (the Guadalupe image the Spaniards wished to impose on the Aztecs). It follows, Rosenthal suggests, that there must also be varying degrees of both *positive* and *negative generality*, and since there can be no *generality* without *vagueness* and no *vagueness* without *generality*, there must be *generality* of Firstness as well as of Thirdness, and *vagueness* of Thirdness as well as of Firstness (this opened the door allowing the Aztecs to slip a dose of *resistance* into their outward show of *conformity*).

Utter vagueness is overdetermined possibility in the most general sense. This is negative generality, since nothing has been actualized to take its place as a generality in the positive sense. What is actualized on the left-side becomes the world of appearances that, underdetermined in terms of positive generality, can at some point give way to some alternative or other (and the Aztecs could create their hybrid image, Guadantzín). A move to the right-side yields positive generality as a dogmatic 'must be', with little inclination to entertain the possibility of alternatives; then, gravitation downward breeds closed, entrenched, and more dogmatic and even hegemonic certainty. Finally, sedimentation settles down to negative generality and positive vagueness, of the 'overdetermined' sort — but now in the sense of Freudian repression, hence the scare quotes — that demands a definite set of canned action and reaction modes to whatever situation happens



to pop up (that, of course, was the ultimate goal of the conquerors, the Spaniards).

Acritical knowing finds itself on the right-side. Before it can become critical, however, it must bring about the swinging, swirling voyage to the left-side, where the horizon is open to view and a proliferation of alternatives emerge. Then, and only then, is it possible to keep the interpretative process alive. If one remains on the right-side, cut-in-stone knowledge is the order of the day. But this would be 'semiotic death', as far as the interpretative process goes. For, what keeps the process vital is a proliferation of alternatives along the *semiotic* stream (and the Aztecs took advantage of one of the possible alternatives they had at hand).

*Pluralism.* It perplexes, and it entices, given the freedom it offers.

### **When the *semiotic* gusher is at its best, what are the consequences?**

The very idea of pluralism lends itself to a multiplicity of interpretations, which is to be expected, of course, given the nature of pluralism: a pluralism of theoretical possibilities would appear to be the only feasibility. Or perhaps better, we should try for a pluralism of theory versions (Rescher 2004: 79). As Rescher argues, pluralism admits to in the very least to four versions (see Table 1), which I've altered in order to render them congenial to the above words on Peirce's concept of the sign.

Let us integrate this table with Figures 3 and 4.

1. *Dogmatism*, takes its place within a system of authoritarian hegemonizing force. It is an outgrowth of heterogeneity-right; it has universalized one particular world version that has become dominant, and the standard to be imposed on oncoming world versions. The dogmatic mind can be dangerous, as it tends downward, threatening a totalitarian homogenization of all world versions and patterning them after the dogma.
2. *Doubt* and *denial*, or *Radical negativism*, has its beginning prior to the left hegemonizing side, where no world version that can possibly be actualized has yet been adopted. This is the good news. As long as an open, dialogic spirit prevails, a host of possibilities are available for adoption. However, a move to

right-side heterogeny by the potential dogmatic mind introduces us to the bad news: skepticism in its most radical form can infiltrate, become entrenched and sedimented, and then solidification and dogmatic closure threatens. When this occurs, no world version has a chance of realizing its self-organizing tendencies, since it will be rejected as soon as it is made known; subsequently, everything must be sent on its linear, tunnel-minded road toward homogeny-right.

3. *Syncretic relativism* can find a home within hierogeny-left, as it enters into the process of heterogeny. The problem is that, as syncretism, it consists of a *mix* of world versions but there is no genuine *fusion*; hence the individual properties of each world version remain by and large identifiable. Syncretic relativism is no more than a salad-like concoction, and it will remain so, because the diverse elements cannot, or at least have not yet, interdependently merged into one another to bring about the creation of something different, something new. In this manner, genuine heterogeny stands hardly a chance of effectively carrying out its role. *Syncretic relativism* is thus of an 'everything that is, is good, and equally viable' sort. Within its context, as pluralistic concoction of world versions, *syncretic relativism* can offer hardly anything different and of lasting value. It only presents an array of divergent, and often incommensurable, world versions. As such, since there is apparently no promising alternative that can be embraced and adopted, the tendency is toward the right-side, where dogmatism attracts and entices.
4. *Contextualized novelty seeking relativism* emerges from homogeny-left and flows into heterogeny. It is a *perspectival contextualist* view that is capable of *fusing a plurality of world versions* (of the Goodmanesque sort we saw in the Aztecs case), in the process create finer and finer differences such that the tendency is toward homogeny. But not quite, for, in the first place, since two or more world versions have become fused, *syncretic relativism* and *doubt-and-denial skepticism* have been left in the wake, as the flow is always toward something novel emerging out there, somewhere, somewhen. And in the second place, there is no longer any tendency toward homogeny-right, since, even though differences become finer and finer, neverthe-

less, there can be no more than a near-continuity of differences, as fine as the smoothest vanilla ice cream. Genuine continuity is possible, but only in the theoretical long run. Thus *novelty seeking relativism* can in the best of all worlds move increasingly closer to that of a *general* world version, virtually in ‘semiotics unbounded’ fashion (Petrilli and Ponzio 2005). But not quite, for *incompleteness* there will always be. (Recall the above sections on our *inductive* and *deductive* limitations, and the *incompleteness* and/or *inconsistency*, as well as the *uncertainty*, of our knowing, the inapplicability of the classical *Principles* of *Identity*, *Non-Contradiction* and *Excluded-Middle* with respect to signs of *vagueness* and *Firstness* and *generality* and *Thirdness*.)<sup>12</sup>

The dangers of dogmatism, religious fanaticism, doctrinaire political ideologies, hard-nosed scientific paradigm enforcers, and such, I trust, hardly need further clarification. Suffice it to say that the skeptic on the left-side engages in a healthy form of moderate ‘negativism’, giving virtually any and all world versions a careful look, yet invariably ending up with the same version. The radical skeptic, on the right-side, categorically and closed-mindedly rejects all available options. The left-side syncretic relativist also maintains a healthy

<sup>12</sup> At this juncture, a few observations. For Peirce the ‘real world’ is the world of ‘sensible experience’ (*CP*: 3.527), and ‘sensible experience’ is the result of perceptual awareness that is given perceptual judgment concerning the nature and content of the percept (*CP*: 5.115). In other words, the interpreted percept bears on what is perceived and it is what is ‘real’ according to the perceiver (*CP*: 5.568). As such, what is judged as what *is*, by and large conforms to the classical logical principles of *Non-Contradiction* and *Excluded-Middle* (*CP*: 3.529). It involves *i-i-i-* between perceiver and the brute physical world; it is the perceiver’s world of ‘fact’, of ‘facts’ that *are* what they *are*, and at that timespace juncture cannot be other than what they *are*. However, this world is the perceiver’s ‘ideal world’, for, since alternatives to what for that perceiver *is* that it *is* will always exist — within the general, ‘underdetermined sphere’ — and can make their play at the most unexpected moments. These alternatives are not forthcoming out of the clear blue sky, but rather, they emerge from *Firstness* — from within the vague, ‘overdetermined sphere’ — hence Peirce’s notion that the ‘real’ must be conceived as ‘fallibilism objectified’ (*CP*: 1.171). This unification of *Firstness* and *Thirdness* with *Secondness*, and overdetermination and underdetermination, Sandra Rosenthal to suggest, “undercuts the dichotomy of foundationalism or nonfoundationalism and along with it, the closely related dichotomies of realism or anti-realism and objectivism or relativism since each of these dichotomies, in its own way, represents the alternatives of an absolute grounding of knowledge or skepticism” (Rosenthal 2004: 207, 209).

posture of tolerance, generally embracing other particular ethnic, racial, and gendered world versions in an effort to maintain openness to all and all within an open dialogical process. She might even go to the left-hand extreme, endorsing the whole bag of world versions, with a presupposed open-minded pluralism. This is an 'anything goes' mentality that sees good on all sides and tends to endorse the whole lot of world versions might eventually enter, somewhat in the sense of Paul Feyerabend (1975), though his form of syncretism does not go without a critical view of left-field bogus versions.

Table 1. Four versions of pluralism.

Condition	Conception	Assertion
A! (B, C ... are of little to no consequence)	Dogmatism. Hegemonizing, imposing one's version on others through coercion and domination.	"One and only One alternative must be adopted, for that is the way the world is".
~A and ~B and ~C ... ~n!	Doubt and denial: skepticism (and toward cynicism). Moderate to radical negativism, carefully appraising world versions and ending up with his/her own, or rejecting any and all world versions except his/her own.	Either, "I'll look at all alternatives with the idea that, ultimately, no alternative (or no alternative other than mine) should be adopted", or, "I'll categorically reject all alternatives, for none of them are adequately viable (except mine)".
A and B and C ... n!	Syncretic relativism. Holism: an effort to hold all his/her versions together, and ideally render them mutually inclusive, yet his/her inclination is to remain with his/her world version.	"All alternatives are to a greater or lesser degree acceptable, within their particular, self-contained, self-sufficient, self-reflexive, holistic cultural context, but I'll stick with my world version, thank you".
neither A nor B nor C ... n) ... but ... → $\psi$ !	Contextualized novelty seeking relativism. Emergentist pluralism: fallibilism admitted, and an incessant search for a more viable alternative through dialogue with others and with the world.	"I've provisionally adopted what appears to be the most viable alternative, with an eye constantly open to other alternatives that within their inherent context, may prove more adequate".

The *novelty seeking relativist*, remaining on the left-side, admits to her fallibilism, hence she never ceases her effort to further specify, clarify, and validate her knowing, such that it may be in the process of becoming something other than what it was becoming. And to top her quest off, she engages in an incessant search for viable alternatives to her process of knowing. She conducts her knowing affairs with care and caution, hoping for something unexpected around the next bend in the stream; hence she is rarely surprised that she's isn't surprised when something unexpected emerges. In short, the dogmatist hardly takes a serious look at any alternatives, the negative doubter might venture to entertain alternate possibilities, but after a brief appraisal will customarily accept none of them, the syncretic relativist tries his damndest to hold the unruly mess in one piece, and the *novelty seeking relativist* circumspectly appraises everything and accepts what she deems most adequate.

Indeed: a pluralism of rivalries. The dogmatist will have nothing to do with any alternative. The skeptic would have us reject virtually everything as irrelevant or inadequate. The syncretic relativist smiles approvingly of virtually all alternatives, insofar as she can keep them interrelative and complementarity, from within her global purview. In other words, she would like to steer clear of confrontations and in-your-face controversy, refusing a negative posture by embracing everything, as if to say that there's no posture she would reject out of hand. For the *novelty seeking relativist*, as emergentist, no alternative is so wretched that it must categorically be tossed in the garbage can, nor is there any alternative so pure that it is capable of standing the test of time indefinitely. Rather, the search for something a mite better must endure.

Yet, syncretic relativism has its attraction

Constructionists and many cultural theorists have been attracted to the syncretic view under various guises (hybridism, transculturation), and such, that, in spite of their better judgment, occasional slips into dualistic, and even essentialist, thinking. Granted, they pay due lip service to the evils of 'binary oppositions', and more often than not make good on their words. Yet, there is some tendency to slip into that smug security blanket. At the same time, they keep minuscule differences

between their opinion and that of somebody else alive, so that conferences, articles, and books can continue to be forthcoming. In their way of thinking, this is what generates and perpetuates pluralism. But actually, there need not be a pluralism of conflicting views; rather, contextualized novelty seeking relativism maintains, insofar as possible, an inclusive concoction of alternatives in check, while always keeping an eye open for whatever might happen to be emerging.

Be that as it may, syncretic relativism holds truth to be sufficiently magnanimous in order to accommodate contradictions without excessive distress. It would seem that, in good Nicholas of Cusa, and later Hegelian spirit, the hallowed Principle of Non-Contradiction can find a comfortable place in the sphere of Truth — which can also be the case in ‘logics of inconsistency’ and ‘paraconsistency’. This conception of Truth sees no problem in encompassing multiple truths and conceding rightness to many rival positions and competing theories. This ecumenical, all-embracing doctrine follows a model reminiscent of a combination of two of Jorge Luis Borges’s (1962) chimerical books. One book, which is the objective of his tale, ‘The Garden of Forking Paths’, contains infinitely self-returning paths. The other book, in the ‘Library of Babel’, contains a Compendium that lists all possible books that can be composed by all possible combinations of a 25-character alphabet. Just as the Library contains all possible books, each of which must confront its anti-book somewhere, so also the ‘Book of infinitely forking temporal paths’ is inherently self-contradictory. And yet, ... the reality of all books, or of the ‘Book of the Universe’, so to speak, is a mind-numbing complexity of possibilities (the overdetermined sphere) that, over an interminable expanse of time-space contexts, gives way to the engenderment of a virtually uncountable number of those possibilities (within the underdetermined sphere).

At first glance, Nelson Goodman’s ‘ways of worldmaking’ (1978) would seem to defend a posture comparable to that of syncretic relativism. His preferred term I’ve used in this essay, ‘world versions’, lays to rest the demand for one and only one Truth. Instead of Truth, there are many possible ‘world versions’ one of which can be within the purview of the subject at a given timespace juncture, though in another time and place an alternative ‘world version’ might be presumed equally adequate; or, the subject can, if she so desires, entertain now one ‘world version’, now another, and then perhaps even another,

for the sheer joy of doing so, for purposes of comparison and contrast, or in order to adjudicate between them so as hopefully to remain with the most genuine 'world version'. In this manner, a variety of competing 'world versions' can be entertained, though no concoction of 'world versions' can legitimately be held up as The World (but such a 'God's-eye' view is impossible for finite, fallible mortals). Goodman's competing 'world versions', in this respect, are not really what syncretic relativism is all about for precisely that reason: they are always at odds with one another, and they make their differences known at every opportunity (e.g. the 'Grue' example).

Moreover, syncretic relativism, a form of 'perspectivism', is by no means simply Hegelian dialectics. There is no synthetic embrace of two contradictory views, which is then plagued with its own anti-thesis, and on and on. There is no synthesis, because there is no dissolution of views, nor is there a fusion of views into a more encompassing view that has taken center stage. There is no grand synthesis for the syncretic relativist, but rather, alternatives are thrown into the same bag, duly entertained, and kept around for good measure, and yet syncretic relativism is considered the order of the day, with full awareness that it is not, and cannot be, the ultimate answer. In other words, to affirm any given alternative is in a sense to negate it, for the process must go on. Syncretic relativism appears generous enough, it would seem. Yet it isn't satisfactory, for the subject can't really have her cake and eat it too; she can't have anything and everything at once and at the same time hold true to her syncretic relativism. What she can do is hold now one alternative — whether fresh and new or some combination erstwhile alternatives — in her purview, now another alternative, and so on, but not two or more of them at the same time.

Syncretic relativism would like to envision itself as a grand cultural symphony. The problem is that for every melody there are virtually countless possible counter-melodies. The resulting pluralism of cultural rhythms would be closer to a multiply variegated baroque counterpoint. Whatever might happen to appear concordant at an unexpected moment turns discordant; balance and harmony become disequilibrium and disharmony; synchrony veers off along multi-linear diachronic streams; consonance turns incongruent; clarity dissolves into vagueness and ambiguity. At times cacophony might seem to erupt.

Refusing any and all discriminations by accepting everything and anything snuffs out controversy; hence dialogue tends to degenerate into a collection of solipsistic monologues. Over the long haul, the end product is the same as if nothing were accepted, dogmatically. Embracing everything, and in the final analysis there is nothing left to say; accepting nothing, and nothing remains. Openness to all alternatives is as if there were no alternatives possibly replacing what had been in some time past adopted, if only provisionally; closedness to all alternatives is as if there were no alternative worthy of replacing anything else, including that which had been in some time past adopted, dogmatically speaking.

In another way of putting it, acknowledging and admitting *all alternate possibilities* puts one within the sphere of *overdetermination*, where Contradictions present no problem, but where there are no differences that make an appreciable difference; so one gets nowhere. Acknowledging and admitting *no alternate possibilities* leads one to assume the end of the road has been reached, and the pot of gold at the end of the rainbow is there, to be snatched up. But there can be no *underdetermination* of the *novelty seeking relativist* sort that entertains the notion of alternatives that may emerge, and the notion that one of them may prove itself a more satisfactory candidate for what had been at some time past accepted.

Summarizing the postures in Table 1 within a pluralist setting, we have:

1. Accept my way and my way only (dogmatism).
2. You might as well accept no way, since they're all most likely fraught with inconsistencies (doubt and denial: skepticism).
3. Accept a combination of any or all of them, as you like, for they are all viable on their own grounds (syncretic relativism).
4. Take what appears most viable from the array of alternatives for the moment, but always keep your options open for something more to your taste in the future (*novelty seeking relativism*).

### **Some variations on the theme**

Giving additional thought to the implications of Table 1 raises some perplexing issues. Nelson Goodman's 'New Riddle' introduces us to



the strange case of the Grueworlders for whom emeralds are 'Grue', the color we would ordinarily label 'Green' up to time  $t_0$ , and thereafter they are what we would ordinarily label 'Blue'. From within the two cultures, that of the Grueworlders and that of Ourworlders, it seems inductively reasonable to project 'Green' (or 'Grue'), into our perception and conception of 'Emeralds'. Eventually, whatever the projection may be, it becomes entrenched, and that's that: 'All emeralds are green (or grue)'. This is our way of classifying the world and it is the only acceptable way (hegemonically speaking, might makes right). Case closed.

But the world of our inductive capacities is not as obedient as we would like. Carl Hempel demonstrates so much: 'All swans are white' can be restated as 'All nonwhite things are nonswans', since the two hypotheses are different formulations of the same proposition. And yet, in spite of Hempel's Paradox, we are usually able to cope. We send and take, and engender and translate signs. We compare new experiences to old ones, and pack signs into the pigeon-holes with which we have become most comfortable. Consequently, we use our conventional sets of categories to classify everything in our world that we wish to select, distinguish, and indicate. If at some moment there is apparently no fit, then some surprise reveals something new. So we revise our 'knowing', make whatever changes that seem most appropriate, and we usually go on with life. In this vein, perhaps virtually any and all color terms, or any other adjectives or qualifying labels attached to substantives, and even those substantives themselves, can no longer be held sacrosanct. Our knowledge of them, and in fact, our knowledge in general, can at the most unexpected turn in the stream of *semiosis* be up for grabs.

But if we have no iron-clad inductive guarantees, should we not go into denial? Become skeptics? Accept nothing in order to avoid falling into error at some step along the way? Or should we allow our categories to proliferate? How many categories can there be for qualifying emeralds anyway? 'Gro', 'Gru', 'Gue', 'Gou', and whatever else, according to the whims of our perceptual and conceptual faculties? Are we not pushed to the edge of the terrible abyss of nihilism? Against our better thinking, we might find ourselves gravitating toward the right-side of Figures 3 and 4, toward closedness. Well, then, perhaps we can accept any and all alternatives as at least ephemerally valid on their own grounds. And so we become syncretic

relativists, more or less embracing an 'anything goes' posture. But in such case, we risk finding ourselves also gravitating toward the right-side, since our obsession for embracing all paths is as closed as any other fixed obsession: the embrace of all ways is but another form of closedness if pushed down the gullet of all oncomers. Should we accept nothing of skepticism and accept everything of syncretic relativism? Nothing and everything, choosing no possibilities and choosing all possibilities and their contradictions? — which is the same as choosing none of them, for everything virtually cancels out everything else. The response should be negative.

Ultimately, solely *novelty seeking relativism* can effectively keep the door open; it is the only viable way, because it embraces one alternative with the admission that at another time and another place some other existent alternative or some new alternative that has surfaced might be more workable. Does this way deny the possibility of some fusion of alternatives? No. For example, with respect to our Mexican cultural case, one person may choose Guadalupe, the other Tonantzín, and someone else neither of them (the skeptic); someone may syncretically accept both of them in some juxtaposition (Guadalupe-Tonantzín); and yet someone else may opt for merging them together, interpenetrating them and rendering them *i-i-i-* with everything else to yield Guadantzín or Tonalupe, according to the emphasis. But this is no static fusion, for it is always becoming something other than what it was becoming.

Is anybody's experience really as valid as anybody else's? Is it equally true and compelling? But 'equally true and compelling' for whom? The experiences of others certainly are not equivalent *for us* — save insofar as we somehow make them part and parcel of our own. Moreover, my own experience, I would like to think, is unique. You surely believe the same of your experience. In any event, if I choose to accept *novelty seeking relativism*, from within each and every timespace context I have hardly any recourse but to proceed from wherever I happen to find myself. This *radically pluralist perspectivism*, nevertheless, is the most satisfactory answer; it involves constant improvisation, perpetual creative responses to incessantly altering cultural processes. There is nothing absolutely given in advance, nothing that we are endowed with as if *ex nihilo*, nothing that we can justifiably presume, or presuppose, no preconditions on the basis of which we can act. There is only the

moment, right here and now. By the time we can conceptually prepare ourselves to take action, the background of our experience has already begun becoming something other than what it was becoming. By the time, in that next moment, we got to the point where we thought we were proceeding, that point has become something else. We cannot know where and when we are, and we cannot perceive and conceive what there is as if from 'nowhere' (that God's-eye view again). Nor are we in a vacuum with respect to our myriad perspectival takes on ourselves, on others, and on our world. Yet, we always enjoy some position; we cannot maneuver in our everyday existence without some position or other, however ephemeral it may be.

But another question emerges: Is this experience always from somewhere and somewhen not also some sort of absolute? As such, does it not range over time and space to afford us ephemeral grasps of that absolute? And if so, then is it not as absolute as any other absolute? No, because there are always complementary contextual possibilities as alternatives to whatever we have at hand. Well then, to pose Rescher's (2004: 117) questions: 'Does not contextualist pluralism put everyone's position on a par? Does it not underwrite the view that all the alternatives ultimately lie on the same level of acceptability?' Once again, we must ask: Acceptability for whom? The response, I would submit, should be: Acceptable for each individual, for s/he is committed to her/his own set of experiences. This, once again, involves a pluralism of multiply diverse postures.

### **Comes another counterargument**

It appears that the form of pluralism I am advocating stands little chance of getting anywhere, since, in spite of my better judgment, it places all competitive views on equal footing. Not really, however. *Pluralistic novelty seeking relativism* admits to some merits, however minimal, in any and all views, and, in addition, it holds that any and all views are fallible, hence no view is absolutely without faults.

No view gets everything entirely right for all time, for all views at some time and place or other will reveal some flaw. Indeed, *pluralistic novelty seeking relativism* resists the temptation to reject rival views outright before they have been duly appraised. It also struggles against gullibly accepting any view straight and without a chaser. There is

discrimination here, but with the idea that whatever looks good today might become ugly tomorrow, and whatever appeared hideous yesterday might take on a rather attractive countenance today. The watchword? Neither dogmatic dismissal nor blind reception; neither total tolerance nor intransigent intolerance, but rather, judicious contemplation and evaluation and selection of what is at hand today, with the expectation that the next day will likely place things in a different light.

This is to say that just as the *pluralistic novelty seeking relativist* would advise others to abandon whatever position they might have held when some more promising alternative happens to come along, so also she would advise them never to cease seeking more enticing alternatives, within ever-changing contexts and circumstances. In this case one should never view one's position as superior to other positions, whether actual or possible. Either there are many future possibilities, and the idea that any possibility is determinately better than all others does not come up, or there is only one possibility that is determinately better than all others, and so the search for that possibility has no end point. If contexts and circumstances are indeed ever-changing — and given the premises underlying this essay, they are — then the search for the ideal superior possibility will never cease; hence there is no knowing absolutely whether a given possibility within some particular timespace context might be precisely what the search has been all about. So in the final analysis it might appear that you can eat your cake according to your heart's desire, but you can never have it in its entirety.

Yet, I would respectfully suggest, one must take a stand, choose sides, decide who is friend and who is foe. And one must defend oneself against those who disagree. If the critic turns out to be dogmatic, a nay-saying skeptic, or an open-arms relativist, one might consider intolerance toward the intolerant, temperance toward the 'nothing cuts it' crowd, and deference toward the 'virtually anything goes' gang. Above all, the search for something better must always go on. And decisions must be made. Buridan's thirsty and hungry donkey that couldn't decide whether to go for the hay to the right or the water to the left is no model to emulate. Nor should one look for some shade of grey as the ideal. From within the timespace context where and when one happens to find oneself, a decision must be made, for the here and now. And if one perchance chooses well, given the general

conventions within one's community, then one might be able to enjoy communing with others for another day.

In this vein, the proper path is: homogeny-left signs emerge, as a consequence of *complementary co-participation* between sign makers and takers and the signs themselves, in *i-i-i-*. Then, differences that make a difference appear, variations on the signs's original theme make their play, and movement tends toward heterogeny-left. Eventually, a tendency toward smugness, toward unwarranted certainty seeps in, and heterogeny-right beckons, offering the security of like-minded and therefore right-minded thinking and doing. But beware. Once on the right-side, hierogeny-right and hegemonic practices, and with them, entrenchment, and tunnel-minded certainty can come to dominate. Dogmatism may soon raise its ugly countenance, and closure exercises its force. The answer? Keep everything open, insofar as possible, at heterogeny-left.

However, objections are still forthcoming: It would seem that my heterogeny-left would entail a perpetual state of dissensus, with no possible consensus. At best there would be no more than some form of syncretic relativism, and at worst there would be a disgruntled atmosphere of doubt and denial, or skepticism. In order for the creation of a coherent, congenial communal state of affairs to come about, there must be a move to the right side, must there not? In order for this community to be self-perpetuating, it must bear some system of values, within the hierogenic mode, which would at least tend toward homogeny-right, but, hopefully, without degenerating into some dogmatically imposed homogenous doctrine.

As reasonable as this sounds, it doesn't quite hold water. On the one hand, heterogeny-left allows for a tolerable degree of dissensus. This isn't to say that it falls into rampant negativism and syncretic relativism, because the most proper hierogenic mode is on the left-side. Hierogeny-left provisionally adopts a *global* view by means of which *local* level dissensus can usually be moderated. When moderation appears unfeasible, then *global* premises, proclivities, presuppositions and preconceptions may be placed in question, and in dire cases that *global* view may give way to some alternative or other. This condition exists only in the presence of open dialogue, openness to the overdetermined sphere of homogeny-left, and a level of tolerance for contradictory possibilities that can seep up through the Included-Middles within heterogenic-left processes. Nevertheless, a

move upward and toward heterogeny-right cannot help but tend toward doubt, denial, and skepticism, and then toward dogmatism. When this occurs, dissensus is eradicated whenever possible, consensus is enforced according to those who hold power, doors are closed to dialogic exchange, any and all Contradictions are barred, and the Excluded-Middle Principle is invariably honored.

### Others, and their cultural contexts

Within a pluralistic context, taking the *open, self-correcting* nature of knowing into account, some degree of *incompleteness*, hence *indeterminacy*, and more often than not *inconsistency*, will sooner or later make their presence known. For what will be one's knowing within some future timespace context will be quite different from what one at present (thinks one) knows. In this manner, our knowing is always restricted by the world version within which we dwell and within which we perceive and conceive ourselves, others, and our physical world.

This knowing involves the whole of our perceptual capacities, and to boot, proprioceptive, kinesthetic and somatic knowing; it is a matter of feeling and sensing in addition to more explicit dialogical and discursive knowing. The problem is that, for some neo-pragmatists, namely, Richard Rorty (1979, 1982), our knowing, and hence our world, is taken as nothing more than a bundle of sentences — a giant step beyond David Hume for whom we are nothing more than a bundle of sensations. Rorty calls this form of knowing 'textual idealism' — a sort of 'language-centered' alternative to George Berkeley's 'subjective idealism'. If we accept this posture, we're in trouble. For we will be ignoring *bodymind* feeling and sensing at its most concrete; that is, we will be by and large ignoring iconicity and indexicality, while our focus will remain on hypertrophied symbolism.<sup>13</sup>

This is to say that *statements* about the world from within hierogeny-left can be true from a particular perspective, but *percepts* and *concepts* regarding the same world are not necessarily true regarding

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<sup>13</sup> For further on the topic of proprioception, kinesthetics and somatic knowing, along with a critique of 'textualism', see Merrell (2003), and especially Shusterman (1992, 1997).

*statements* from some other perspective (they true for us, but not necessarily true for others). Rorty would like to keep the conversation between ourselves and others and our physical world open, so we can come to an agreement about our *percepts* and *concepts*. The problem is that the other minds out there occasionally tend toward authoritarianism. This means that they might wish dogmatically to make their statements true and the statements of others false, which might lead to discrimination, racism and fascism. And great harm could be meted out to the weak by the strong, who are strong, because they were most effective in pushing their way around. All this entails a move toward hierogony- and hegemony-right. But we don't have to share beliefs with or agree with others in order to understand them. We can to a greater or lesser degree understand them, yet tolerate them in our disagreement.

How can we be sure we can understand them? For example, how do we know that Ptolemy and Copernicus were talking about the same Earth and Sun we talk about? They're not here to tell us so. How, then, can we be so confident that our Earth and Sun are either the same as or different from theirs? How can we know if Joseph Priestley's 'dephlogisticated air' is the same as or different from Henri Cavendish's 'oxygen', or our 'oxygen' for that matter? How can we know in the twenty first century whether Guadalupe and Tonantzin were distinct, fused, or merely confused, in the minds of the conquered Aztecs? And how is it that I can with such facility coin the agglutinated term 'Guadantzin' to depict the Amerindians' perception and conception of their venerated image? Answers are not easily forthcoming. But, if answers there must be, I would expect they would involve differences with respect to how the world is perceived and conceived by way of feelings and sensations with respect to Peirce's Firsts, of perceptual inferences with respect to Peirce's Seconds, and of conceptual inferences with respect to Thirdness. Before one can approach others and their cultures, one must become engrossed, through *bodymind* feeling and sensing at its most basic, with: (1) one's immersion within one's own cultural flux and flow, (2) one's culture-dependent, conventional practices regarding one's community and one's physical world, and (3) one's notion of a generalized set of interpretative modes according to the presuppositions, predispositions, and prejudices, and the conventions and norms, of one's culture.

One finds oneself within one's conventions and norms, acknowledging and embracing them in part explicitly and in part tacitly. These conventions and norms are virtually self-sufficient yet self-correcting, self-contained yet open: they are by no means autonomous, fixed, wholes. However, even under optimal circumstances, there is no unchanging, well-formed and presumably universal consensus with respect to one's conventions and norms within one's community. There is no set of like minded and presumably right minded individuals, homogenized by coercion, propaganda or brainwashing. Rather, there is a bubbling mix of behavioral patterns, ways of feeling and sensing, and modes of perception and conception. There is an open, almost free-wheeling exchange of opinions and ideas, often bordering on conflict and struggle. Under these conditions, there may be pursuit of communal consensus, for sure. And there is the desire for balance and harmony, relatively free of discord, dispute and wrangling. Who wouldn't wish for substantial agreement among members of a benign and enlightened community?

However, substantial agreement among members of one's community is a far cry from beginning to understand others within their community, and it is even further from the dream of consensus.

### **Yet, is it not possible to understand others?**

How does one find one's place, and the place of others, within one's community? This problem should precede talk of consensus, and even more so with respect to points of contact, and the possibility of some consensual view, concerning vital issues across cultures. When one is within the flux and flow of one's cultural world, given its complexity, its pluralism, then, and only then, can one effectively hope to enter the flux and flow of some alternative to one's cultural world, or of some alternative cultural world. And one might hope that understanding between cultures is possible through some sort of tacit agreement or consensus between members of those cultures.

Jürgen Habermas's (1971, 1979) communicative project to complete modernity's enterprise often sees consensus regarding our community, or our community and other communities, as a realizable goal. He would like to avoid Hegel's notion of evolution toward the ideal order by more or less adopting Peirce's idea of an asymptotic



approximation toward consensus. What is meant by an 'approximation toward'? The asymptote gets nearer and nearer to the finish line, but the increments remaining to be traversed become finer and finer, such that termination of the increasingly torpid trek will occur only at the infinite stretch. Commensurately, for Peirce, consensus, knowledge of the truth, or the end of science as it were, is available solely to some infallible and immortal individual, or to a community containing and infinity of individuals. So we finite, fallible humans will never reach the ideal. However benign Habermas's social order may be, if we take Peirce at face value, it will never be so harmonious, so complete, and so consistent or free of contention and strife, that there will be nothing more to be done. The commonsensical notion among members of a given community that the goal of consensus is the way to go is admirable, and it can provide for a healthy exchange of ideas and modes of behavior. But if expectations will settle for nothing short of consensus, frustration will surely be the virtually inevitable yield.

The problem with the idea of consensus is that, no matter how satisfactory it might appear, sooner or later some degree of dissensus will enter the scene (Rescher 2004). This is both the boon and the bane of diversity, of plurality, of differences that make a difference. 'Like minded' and 'right minded' thinking and talking and behaving might take on the trappings of an ideal community, even of a democratic community. But divergence, discord and disagreement will always be just around the next bend in the road. Tolerance is called for. And if practiced, there will nevertheless be some indication or other of some degree of intolerance. Reasonableness is called for. Yet irreason will tend to emerge here and there when least expected. And reasonableness will eventually show some unreasonable countenance. Some degree of dissensus, dissonance and divergence is inevitable. This should be no call for alarm, however. Disagreement within pluralism can be applauded, that is, if those who disagree are willing to enter into open-minded dialogue. This is a matter of acquiescence within disagreement, however, not subservient acquiescence; it is acquiescence, but with openness toward alternatives, and when a viable alternative presents itself, even if it appears to flow against the grain of the communal current, the option exists that some degree of resistance may be forthcoming. In this regard, there is never complete uniformity (homogeny), but always some element of dissonance and diversity (heterogeny), that perhaps at various juncture may threaten

to erupt into conflict and perhaps even chaos — but every measure must be taken to prevent this.

Another problem with consensus is that its pursuit is by and large *counterproductive* — if consensus could somehow be achieved, the desire to achieve success of one's ideas and interpretative strategies over those of others would abate — and it is *unrealistic* — since total consensus can't be achieved, why waste time striving to reach it? The pursuit of excellence and the desire to succeed more likely than not exists within a context involving diversity and conflict: pluralism. This relatively benign form of diversity and conflict is most notable along the left-side of Figures 3 and 4, since the supreme goal of the dominant haves on the right-side is to hammer the subordinate havenots into shape so as to homogenize society, thus reducing diversity and conflict and creating, through dedifferentiation, conformity and passivity.

Still, in spite of the inevitable pushes toward right-side homogeneity and consensus, dissensus there will always be. The telling tale is whether a given society, or two different societies, both at the *local* and the *global* levels, can maintain a healthy degree of tolerance in a diverse social milieu consisting of high levels of free thought and expression and at the same time exact a sufficient degree of *mutual acceptance* of and *accommodation* to traditional and established standards, values, and modes of conduct. In other words, pluralism need not end up in chaos.

### **Back to the vortex**

The fact is that, whatever *mutual acceptance*, *accommodation*, and *conformity* there might be, intellectual, cultural, and social progress is often accompanied by *resistance* and *rebellion*, whether through print or by violent protest, against complacent, conservative dominant groups. And from whence does this resistance and rebellion flow? From the sphere of possibilities, emerging into the swirling, fluctuating, undulating, scintillating *semiotic* process at the lower left-side of Figures 3 and 4. In fact, those figures are calling out for another look in the form of Figure 5.

We see the morphological lines of flowing transition between terms and from column to column. We see the radical break from

homogeny-right to hierogeny-left. And we see something new: the process of dyadism becoming triadism and triadism pluralism, and vice-versa, finally to monism. The sphere of *possibilia* embraces everything, the range of all unselected possibilities plus those paltry few that have been selected and actualized into some cultural milieu as hierogenous, and perchance Manichean dualistic distinctions, while that which remains unselected and within the nonselected awaits its selection at some propitious future moment or other. Once entering into the processual flow and toward heterogeny-left, cultural distinctions become finer and finer, as changes render them increasingly ambiguous and vague. In other words, distinctions become more and more differentiated until they threaten to become indifference rather than difference. *Novelty seeking relativism*, provides freedom in an open process to continue on, creating differences that make a difference, no matter how virtually imperceptible they may become.

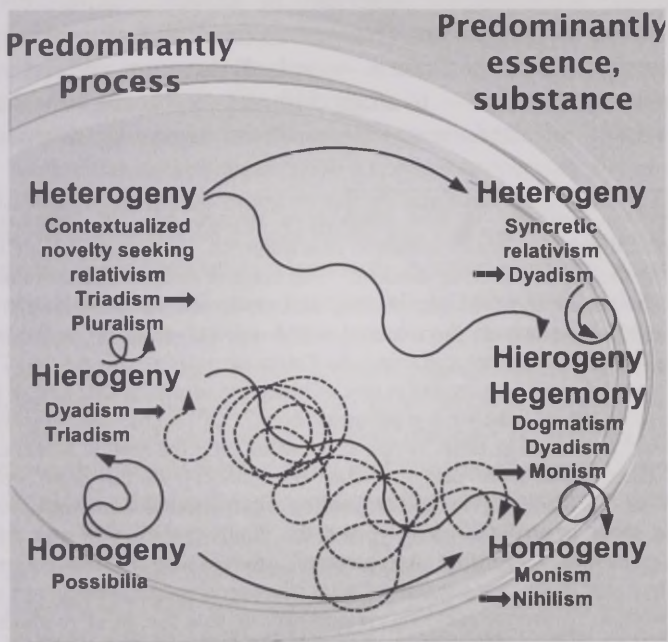


Figure 5. Homogeny left, overdetermined and of utter vagueness, is what 'might become', within some timespace context. Hierogeny left consists of what *is* what it *is*, or at least so it appears to us.

This form of relativism is such that only one alternative would ordinarily be accepted from within a particular timespace context. This is not necessarily based on rationally cogent grounds, but it emerges from considerations of taste, of personal inclination, or social conventions. It is a pluralistic relativism, a relativism emerging contextually, and dependent upon particular perspectival modes created from arrays of cultural contexts; it is a relativism regarding which the community as a whole has created and developed a particular world version that allows for a diversity of variations within the parameters set by that community's set of conventions. This is the 'idealistic' side of Peirce's enigmatic philosophical posture he labels 'objective idealism'. The 'objective' side is found in tempered and guarded relativism — perspectivism, contextualism — according to which only one alternative at a given timespace juncture should be accepted, and this acceptance has a basis of general community agreement with respect to what should be prohibited and what should be permitted.<sup>14</sup>

Left-side heterogenous pluralism, or *novelty seeking relativism*, tends toward indifferentism. There is maximal diversity which allows different sign makers and takers — and, all the more, different groups and timespace contexts — to adopt different views. The idea that there are a variety of fundamental perspectives regarding the nature of

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<sup>14</sup> 'Objective idealism' at first blush is a strange mix. In formulating his philosophical posture, Peirce is caught in a dilemma. He tries to wiggle out of it by coining the term 'objective idealism'. The concept follows Peirce's notion that interpretants, and our world version they and we have co-participatingly created, involve neither exclusively the material world nor the perceiving and conceiving mind, but a fusion of matter and mind. As Peirce summarizes his notion: "The one intelligible theory of the universe is that of objective idealism, that matter is effete mind, inveterate habits becoming physical laws" (*CP*: 6.25). The physical world is the world perceived in static slices, so to speak, and the mental world creates a flow of these slices from past to future (*CP*: 6.127). In this light, 'objective idealism' is the Identity principle (regarding interpretants) *becoming processual* such that there is no fixed identity, and the Non-Contradiction and Excluded-Middle principles (regarding interpretants) *giving way to the becoming of alternatives and their displacement* of what was perceived and conceived as fixed. In this manner, 'objective idealism' is comparable to a fusion of methodological objectivism and epistemological idealism: according to our preferred methods and strategies we interact with the phenomena of our physical world and our mental worlds in order to make them more intelligible, but we are repeatedly thwarted in our efforts, and we replace what we (thought we) knew by something we (think we) now know.

things that engender different positions is thus virtually as old as human societies themselves. Genuine *novelty seeking relativism* takes things as they come such that from the view of various groups indifference can eventually pervade. In this regard, relatively paltry distinctions are of little regard, since, if they are not totally contradictory, then the differences can be smoothed out, and if they appear contradictory, then most likely there is equally no problem, for something new can likely slip through the two horns of the dilemma and emerge as newly born novelty. The advice would be: 'nothing ventured, nothing gained'. Take risks, keep a level head, improvise at every opportunity, and things will have a tendency to work themselves out.

Risks, however, can emerge from three different directions. First, there are risks disrupting the effort to avoid risks altogether. Aversion to risks breeds intolerance toward anything other than what is deemed 'normal' and hence right. This is the dogmatic, hegemonizing attitude, which counsels against taking chances by playing it safe. What is done is the right way, and every other way is wrong. Those who hold this attitude are prone to expect the worst — the natural consequence of skepticism, along the right-side of Figures 3, 4, and 5. A second form of risk involves calculated risk taking. Those who tend to fall into this category have what would seem to be a natural propensity for holding all possibilities in check in order to weigh each one against the others and decide which option will most likely pay the most dividends. This is an expression of syncretic relativism. A third position regarding risks involves caution, for sure, comparable to calculated risk taking, but, in addition, it includes the willingness to seek out new risks with the idea that they will lead to the greatest possible variety of alternatives regarding life situations. This is a more daring calculated approach than the second form of risk taking. It delights in the consequences that ensue from a risky pathway having been taken, and equally delights in the challenge at every step of the way and the need constantly to improvise. Risk seeking takes chances, with eager anticipation and relish, assuming that things will eventually turn out for the best, and if not, it will have been a fruitful learning experience to keep in mind for the next encounter. Such risk taking is a prime example of *novelty seeking relativism*; it is left-side heterogeneity at its best.

### **In other words, practice moderation in all things**

Open-minded pluralism, as suggested, does not simply entail an 'anything goes' posture. It is no uncritical acceptance of whatever risk happens to pop up. It is no wild, uncritical embrace of anything and everything. It involves risk seeking and risk taking with care and caution.

Risks are sought out, with this idea that by taking risks and improvising along the way to keep one's head above water, change remains alive and well, and novelty continues to seep up into the open. Whereas the dogmatist and skeptic bar all the available options except the only one that is viable, theirs, and counsel us to reject everything that deviates from the pathway of appropriateness, the *novelty seeking relativist* moves in the opposite direction, willing and able to reject whatever is at hand here and now for something that might take on the guise of acceptability in the next here and now. Alternatives are brought together, and fused, if possible, in order to draw something new from the fountain of opportunity within the *Included-Middle*, between the horns of every pair of otherwise antagonistic *either/or* options.

*Novelty seeking relativism* sees rival alternatives as equally plausible, until they prove otherwise in the give-and-take of human experience within diverse timespace contexts. That is, a given workable alternative, having emerged from the *Included-Middle*, can often be capable of accommodating some contradiction or other. If there is lack of self-consistency, then self-sufficiency can overcome the problem, and if not, with the addition of some improvised measures here and there, the problem can often be at least partly ameliorated. This posture conjoins alternatives, and on the whole, life can go on, albeit often to the tune of no more than a syncopated, tenuous balance.

The problem with such tenuousness is that insecurity can enter, uncertainty can make its play, an inevitable move toward the right-side might ensue, and increasing closure threatens, with all its *either/or* imperatives and shunted hegemony. Subsequently, authoritarian truth, *Our Truth*, becomes the one and only alternative. Along with truth, the word can tend to become virtually sacrosanct, at the most extreme much in the order of religious rhetoric. The book, consequently, is considered to say what it says, and that's that; forget

multiple competing readings. And we are flirting dangerously with homogeny-right mandates. However, just as a library contains many diverse books, some of them presenting counterarguments to arguments in other books, others telling stories as variations on themes of other books, and still others creating enticing juxtapositions between themselves and other books, so also reality is a complex concoction of many different and discordant world versions. Each book has its own consistent or inconsistent, and incomplete or presumably incomplete — and if so, inconsistent — organizing style led by its own ‘practical reason’ (Sahlins 1978). But *The World*, the collection of all possible world versions, encompasses all possible books, just as the world of our concrete everyday experiences encompasses multiple world versions within our own culture and from culture to culture, as well as all cultures that have been in the past, and all cultures that will have been in the future. Each world version presents its own complexity, and *The World* as a whole embraces them all without being confined to any of them (Goodman 1978).

This conception, quite obviously once again, entails *novelty seeking relativism*. One must bear in mind, however, that *novelty seeking relativism*’s fusion of world versions, of perspectives, and of cultural practices, does not involve a collection of elements held together with superglue, while they all retain their former identity. Fusion is brought about from within the *Included-Middles*, between two or more antagonisms, distinctions, or even minute differences that make an important difference, as something new that nonetheless carries within itself something of the nature of that from within which it emerged. Nothing is absolutely lost, and nothing is absolutely won; there is no absolute gain and the pain is never without some reward. Everything always flows, toward somewhere and somewhen. Along left-side hierogeny and heterogeny, of course.

### Wrapping it up with an analogy

The pluralist view is that of an ongoing soccer game — not basketball, baseball or football, punctuated by lapses between plays, time outs, and such — during which each player contributes to the overall effort, complementing the other players, all of them, to the rhythm of the game. All players are co-participating with one another in the effort to

get the ball between the goal posts. The players are the melody and the harmony; they are syncopated, now consonantly, now dissonantly, now improvisingly creating a tenuous balance while passing the ball back and forth, now to the left, now to the right, now closer to the goal, now strategically in the other direction, and all the while presenting a counterpoint and an alternate melody to counteract the counter melody their opponents defensively present against their melody in the process of its unfoldment.

Like the soccer match, things don't usually go as planned; in fact, they rarely go as planned — that's why the number of goals during a game is always so paltry. Incompatibility and inconsistency is more often than not the yield. A strategy can end in incompleteness, loss, and frustration, when the opposing team comes up with a surprising countermove. But there's no turning back, no time to regroup, no rest period to map out a new strategy, for the game must go on, processually. There's pluralism, for sure. Each player has her/his repertoire of patented moves, and the collection of players making up the team has its characteristic way of playing the game as it evolves. The team incorporates a 'world version', one version among many within the vast universe called 'Soccer', and after a losing effort, the players might convene for a special session and a pep talk after which they have created a new 'world version'. Then, with renewed confidence, they enter the uncertainty of the next match with a different team. Pluralism, processual pluralism: that, I would submit, is the name of the play, of *semiosis*.

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<sup>15</sup> See <http://www.digitalpeirce.org> .

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### **К вопросу о плюралистическом и интерреляционном понятии семиозиса**

Всю сложность любой достаточно развитой знаковой системы можно охватить с помощью: 1) Пирсовской «логики неопределенности», 2) его категорий, 3) понятий *сверх- и недодетерминированность, неясность и всеобщность, противоречивость и неукомплектованность*, 4) опровержения принципов классической аристотелевской логики. Благодаря сложности знаковых систем существует *семиотическая неопределенность*, которая с одной стороны предполагает ограниченность знаков, но в то же время позволяет и *семиотическую свободу*, которая становится причиной размножения знаков, результатом которого в свою очередь будет плюралистический интерреляционный *семиозис*. Это размножение знаков обязано своим непрекращающимся текучим изменением тому факту, что правила «непротиворечивости» и «исключенного третьего» классической логики неприменимы к ним ввиду *неясности и всеобщности*, содержащихся во всех знаках. Все ограничения и свобода при создании и выявлении знаков объяснимы в рамках «индуктивного парадокса» Хемпеля и «новой загадки индукции» Гудмена. В качестве конкретного примера в статье с помощью методик Хемпеля и Гудмена

анализируется противостояние картины мира испанцев, в центре которой находится гваделупская Дева, миру ацтеков (в центре которой стоит бог Тонанцин). Пример иллюстрирует многозначную, неясную и сложную природу межкультурных знаковых систем, в дальнейшем приводящие к плюрализму. Фактически, исходя из «ограничивающих/лимитирующих теорем» Гёделя, Тюринга и Чейтина невозможно отрицать плюрализм, прежде всего из-за *противоречивости* и *неукомплектованности* сложных структур. Одной из возможных моделей, описывающих плюрализм, могло бы быть *стремящееся к релятивизму контекстуализированное новшество*. Эта форма плюрализма охватывает *сверхдетерминированность* (что характерно в общих чертах пирсовской Первичности) и *недодетерминированность* (что в общих чертах характерно для пирсовской Третичности), выдвигая социальный контекст, через который становится возможным объяснить все локальные контексты. Нужно иметь в виду, что сумма всех локальных контекстов никогда не достигает уровня глобального контекста, так как целостность глобального контекста никогда невозможно охватить полностью по причине неизбежной конечности и фаллибилизма нас как субъектов. Тем не менее мы обычно способны справиться с процессуальным плюрализмом в рамках игры *семіозиса*.

### Pluralistliku ja suhestusliku semioosi mõiste suunas

Ükskõik millise rikkaliku märgisüsteemi kogu keerukus on hõlmatav järgmiste elementidega: Peirce'i 'ähmasuse loogika', tema kategooriate, mõistete *ülemääratletus* ja *alamääratletus*, *ähmasus* ja *üldisus*, *vastukäivus* ja *poolikus* analüüs ning klassikalise aristotelliku loogikapõhimõtete kummutamine. Tingitud märgisüsteemide keerukusest, eksisteerib teatud *semiootiline määramatus*, mis ühelt poolt eeldab märkide piiritletust, kuid võimaldab samaaegselt *semiootilist vabadust*, mis põhjustab märkide vohamist, mille tulemuseks on omakorda pluralistlik suhestuslik *semioos*. Märkide vohamise igavene voolav muutumine on võimalik seepärast, et klassikalise loogika 'mittevasturääkivuse' ja 'välistatud kolmanda' reegleid ei ole neile võimalik rakendada kõikides märkides sisalduva *ähmasuse* ja *üldisuse* tõttu. Kõik märgiloomise ja märgistatud saamise piirangud ja vabadus on selgitatav Hempeli 'induktiivsusparadoksi' ja Goodmani 'uue induktsioonimõistatuse' raames. Konkreetse kultuurinäitena analüüsitakse käesolevas artiklis Hempeli ja Goodmani

metoodika järgi hispaanlaste maailmapilti, mille keskmes oli Guadalupe Neitsi, vastanduses asteekide maailmaga, mille keskmes oli jumal Tonantzin, illustreerimaks pluralismi aluseks olevate kultuuridevaheliste märgisüsteemide mitmetimõistetavat, ähmast ja keerukat loomust. Õigupoolest on Gödeli, Turingi ja Chaitini 'piiritlevatest teoreemidest' lähtudes pluralismi võimatu eitada, seda eelkõige keerukate struktuuride *vastukäivuse* ja *poolikuse* tõttu. Üheks mudeliks pluralismi käsitlemisel võiks olla *relativismi poole püüdlev kontekstualiseeritud uudsus*. See pluralismi vorm hõlmab *ülemääratletust* (mis on üldjoontes iseloomulik Peirce'i Esmasusele) ja *alamääratletust* (mis on üldjoontes iseloomulik Peirce'i Kolmasusele), tuues esile globaalse konteksti, mille kaudu on võimalik seletada kõiki lokaalseid kontekste. Tuleb silmas pidada, et kõikide lokaalsete kontekstide summa ei küüni kunagi taolise globaalse konteksti tasemele, kuivõrd globaalse konteksti terviklikkust ei ole meie kui subjektide lõplikkuse ja ekslikkuse tõttu iialgi võimalik täielikult haarata. Siiski oleme semioosi mänguruumis enamasti võimelised toime tulema protsessuaalse pluralismiga.

## **Semiotics as the science of memory**

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**Abstract.** The notion of culture implies the relative stability of sets of algorithms that become entrenched in human brains as children become socialized, and, to a lesser extent, when immigrants become assimilated into a new society. The semiotics of culture has used the notion of signs and systems of signs to conceptualize this process, which takes for granted memory as a natural affordance of the brain without raising the question of how and why cultural signs impact behaviour in a durable manner. Indeed, under the influence of structuralism, the semiotics of culture has mostly achieved synchronic descriptions. Dynamic models have been proposed to account for the action of signs (e.g., semiosis, dialogism, dialectic) and their resulting cultural changes and cultural diversity. However, these models have remained remarkably abstract, and somewhat disconnected from the actual brain processes, which must be assumed to be involved in the emergence, maintenance, and transformations of cultures. Semiotic terminology has contributed to a systematic representation of cultural objects and processes but the philosophical origin of its basic concepts has made it difficult to construct a productive interface with the cognitive neurosciences as they have developed and achieved notable advances in the understanding of memory over the last few decades. The purpose of this paper is to suggest that further advances in semiotics will require a shift from philosophical and linguistic notions toward biological and evolutionary models.

In epistemological matters the notion of heritage is double edged. Undoubtedly, historical research can trace back the development of concepts, models and methods and bring to light some patterns of dynamic continuity through filiation or contagion. But, more often than not, the most interesting achievements in the pursuit of human knowledge comes from sudden shifting of perspectives and counter-

intuitive evidence that succeed in overcoming the force of inertia of intellectual traditions. From this point of view, heritage can be equated more with epistemological hindrance than with scientific advances. Naturally, for those who consider it to be a mere doctrine, semiotics can appear to have been formed by successive layers of commentaries and by school debates and exercises derived from the authoritative words of some early fountainheads. Ultimately, a doctrine can only progress through further indoctrination that conserves and increases the "heritage". But, if the semiotic project, as many modern thinkers understand it, has some legitimate claim to scientific status and epistemological relevance, it must be prepared to undergo paradigmatic shifts and confront cognitive revolutions. It cannot develop in isolation from the dynamic of the sciences, even if it positions itself on a different level. This, however, is a risky epistemological position.

Semioticians have often raised the question of the epistemological status of the sciences. But what about the epistemological status of semiotics itself? Is it not all too often taken for granted by semioticians that their discipline provides a privileged vantage point? Is this really so? What kind of knowledge does semiotic inquiry produce? What does semiotic knowledge consist of? Are the methodologies used by semioticians reliable? These questions are in order for whoever tries to explore the interface between semiotics and the sciences.

## **1. Semiotics and the sciences**

For the sake of heuristic simplification, we can consider that there are at least four basic ways of acquiring knowledge, that is, meaningful information either in the form of solutions to well defined problems or counterintuitive discoveries that bring forth new ways of interpreting data and the life experience in general. The great majority of those involved in research are likely to agree that these four ways of acquiring knowledge include the following.

(i) The construction of problems based on the state of knowledge in a particular domain and the invention of methods to solve these problems. For instance, it is known that some experienced events are somewhat represented in the human brain and remain accessible to consciousness only for a limited time after which they fade away,



while some others are stored in a manner such that they remain accessible practically for a life time. Thus, neuropsychologists distinguish working memory (that ensures the conscious binding of the parallel and successive stages of a complex task), short-term memory (that lasts from a few hours to a few days) and long-term memory (that persists over years and decades). These various kinds of memory can be selectively impaired by brain traumas and diseases. Therefore it can be assumed that either the storage processes or the accessibility processes, or both, are supported by different neurological networks and architectures. Consequently, neuroscientists design experiments in order to obtain evidence toward a solution to the precise problems that can be formulated with respect to which specific cognitive deficits can be correlated with which functional part(s) of the brain.

(ii) Another way to obtain information is by reasoning and argumentation that build virtual models either through a calculus which is blindly pursued to its ultimate consequences, or a systematic metaphorical extension of patterns across apparently distant domains of experience. A good example of this is Gabriel Tarde's elaboration of a nominalistic model of collective behaviour based on imitation and his extension of epidemiological models to the understanding of languages and other semiotic systems as social phenomena (Tarde 1903). More recently, a similar reasoning lead evolutionists such as George Williams (1966), Richard Dawkins (1976) and Terrence Deacon (1997) and social scientists such as Luigi Cavalli-Sforza and Marcus Feldman (1981) and Dan Sperber (1996) to formulate counterintuitive hypotheses purporting to explain cultural emergence, diffusion and transformation through the biological notions of parasitism and contagion. Similarly, Lévi-Straussian structuralism introduced a new vision of cultures by pushing to their conceivable limits the models extrapolated from structural linguistics (Lévi-Strauss 1963).

These two ways of producing information are deliberate and controlled. They usually operate in complementary manner. The latter may lead to formulating precise problems such as the question of how cultural knowledge is represented in the human brain. Is it through digital algorithms or prototypical analogical models? Is its storage content specific? Cognitive neurologists contend that cultural information is acquired, stored and accessed in a manner that is different

from episodic memory (working, short- or long-term) and various people have given various names to cultural memory, some calling it “semantic memory”, some “generic knowledge” or “general knowledge of the world” (see Tulving 1995). Another question is whether this kind of memory is a sort of procedural memory — that is, the memory that supports skills, habits, all that can be defined as instances of “knowing how” rather than “knowing that” — or is it implemented through specific processes in a distinct architecture.

(iii) A third way of acquiring knowledge is through chance discovery, also called serendipity, the surprising occurrence of an empirical event that is beyond the scope of rational expectations as defined by a state of knowledge in a given domain. Short of probing at random, there cannot be a cost-efficient method that produces serendipity. But, in spite of its unpredictability, serendipity is far from being a negligible aspect in the edification of scientific knowledge. If cognitive neuroscientists now tentatively distinguish at least five kinds of memory (namely, 1 — procedural or non-declarative, 2 — episodic or personal, event memory, 3 — perceptual priming memory, 4 — primary, short-term or working memory, 5 — semantic memory), it is because these categories emerged from surprising observations (e. g., Blakemore 1977). Striking examples have come from pathological cases that showed the selective impairment of only one of the five kinds of memory that are currently distinguished as a result of these observations rather than as result of pure reasoning. Earlier clinical categorisations such as dementia or amnesia are now replaced by more refined cognitive pathological categories, and several explanatory models are competing for confirmation either through case studies or through non-invasive observations.

(iv) Finally, an important source of information comes from an approach to research that is called “meta-analysis”. It consists of reading through a large number of specialised scientific publications, selected among the published literature in one or several domains of inquiry, and of relating the partial results within a more encompassing model than the ones that are held by the various specialists concerned. In so doing, results are assessed in view of whether or not they are congruent with a particular hypothesis, and thus support or weaken an argument. If data appears to contradict each other, it may be that some

data are artefacts of the experiments or that the model needs to be changed in order to accommodate those seemingly incompatible data. It happens indeed that through meta-analysis some unexpected patterns emerge which lead to new theories.

How does today's semiotics fare with respect to these four ways of acquiring knowledge? Putting aside the part of semiotic discourse that consists of mere doctrinal exegesis of speculative texts written in a more or less remote past, it would seem that semiotics is an epistemological enterprise that, until now, has relied upon argumentation and meta-analysis rather than upon experimentation and serendipity. While there is always a more or less latent expectation of revolutionary discovery in the sciences, the epistemological horizon of today's semiotics is fairly redundant and lacks a sense of risk. Information comes more in the relative form of reconfigurations or formalizations of established knowledge than in the form of radical paradigmatic shifts. This remark is not meant to question the validity of semiotics with respect to the construction of scientific knowledge. On the contrary, argumentation and meta-analysis are essential parts of even the most specialised empirical research since any design of experiments is necessarily based on some form of argument derived from past experimental results, but this is done usually within the confines of a disciplinary culture or subculture. For instance, neuropsychologists currently test the threshold of facial recognition in patients affected by various kinds of neurological lesions (e. g., Bruce *et al.* 1992). Clinical data led them to assume that primate faces constitute a particular perceptual input that tends to override other inputs and focus attention, and that the memory bank of familiar faces is handled by specific brain architectures and circuitry. For instance, experiments in this domain consist of testing the speed of recognition of a visual pattern as a face using as inputs various versions of a drawing or of a photograph representing a human face (degree of schematization or disorganization, unusual orientation, different patterns of light and shadow, scale of chromatic saturation, etc.) both in normal and brain-impaired patients. Other experiments test the recognition of familiar faces (kins, historical figures or contemporary celebrities) (Moscovitch *et al.* 1997). The punctual results thus obtained can become significant only through wide-ranging meta-analyses of similar published experiments, as well as psychological and ethnological

reports concerning the importance of facial recognition and categorisation in social transactions from an evolutionary point of view. It is known, for instance, that monkeys recognize individual infants in their band and behave toward each of them in view of their past experience with the infants' mothers, that is, what is a particular mother's rank and whether they have with her a history of mutual support or aggression (Cheney, Seyfarth 1990; Kummer 1995). However, meta-analysis across disciplines is extremely rare in the sciences, and the role of semioticians in this respect is crucial. Even if they tend to jump to unwarranted conclusions, or to reduce a wealth of data to the few abstract categories that their particular brand of semiotics has dreamed, the epistemological dynamic thus created can only feed further speculations, argumentations and experiments. Naturally, this can be true only as long as semioticians develop and cultivate interfaces with the researchers in the sciences, and do not lock themselves within a solipsist formal system or a mythical grand narrative.

## **2The challeng of memory**

Considering that semiotics takes as its main object of inquiry systems of signs that are learned (languages, cultural codes, social discourse, etc.), it is surprising that so few semioticians so far have shown a marked interest in the science of memory. Moreover, although most semiotic models that have been produced to date imply some form of constitutive duration over time — let them be associative, mimetic, intertextual, processual, dialogical, dialectical, and so on — the issue of their memory foundations has been generally obfuscated by considerations bearing upon their logical consistency. We can say that, all in all, memory is taken for granted in semiotic speculations as we take for granted the oxygen we breathe. Unfortunately, the memory that is taken for granted is a fallacious representation that is conceived, in mediaeval manner, as a faculty of the mind, together with imagination, emotion, reason, volition and the like. Semiotic models construct a kind of virtual universe to which common sense knowledge and thought experiments lend a degree of credibility. Semiotic models are indeed often introduced and delivered through a rhetoric of philosophical persuasion and the way some of these models have

spread among fairly large constituencies owes a great deal to the charisma of a few individuals and the institutional pressures they create. Like sects, some semiotic models offer a theory of everything rife with tautological predications and self-fulfilling prophecies. They lack the capacity of constructing a horizon of ignorance, that is, to formulate real problems that can be solved, so as to provide the means of eliciting true information (Bouissac 1992). Fortunately, semiotics fosters since its early beginnings a critical capacity that it can apply to itself as well to other epistemological constructs. It is within the purview of the semiotic project to critically raise the issue of why memory is so conspicuously absent from contemporary mainstream semiotic discourse.

Memory has been a topos of western philosophical discourse at least since Plato. If innate ideas constitute a sort of ontological memory, recoverable through anamnesis, signs are only shadows of shadows and what is learned and remembered through sensorial experience can only be accidental and superficial. The relative significance of these two kinds of memory — ontological and accidental — in Aristotle and Augustine is endlessly debated in the Middle Ages. For instance, Richard Fishacre and his disciple Robert Kilwardby (ca 1215–1279) pursued this debate by explicitly distinguishing two types of memory (Popkin 1999: 239–241). Such a distinction is based on impression, reasoning and argumentation rather than upon psychological evidence. Later philosophers, relying on both logical reasoning and psychological evidence provided by controlled introspection or other empirical observations, will propose different kinds of distinctions, always pointing to the fact that memory is not a simple, wholesome faculty but a complex, more or less diversified set of competencies. For instance, Bergson (1914) distinguishes “habit-memory” (the capacity of remembering something one has learned) from “pure memory” or “recollection” (the capacity of representing in the present something one has experienced in the past). Taking issue with Russell’s logico-philosophical views on the relationship of memory to knowledge (1921), Ryle (1949) points out that when we use the verb “remembering” we may mean any of the following different senses: “retaining”, “memorizing”, “recognizing” or “recollecting”. However, these distinct processes remain for him “aspects” of a single knowledge property. The details of this continuing philosophical discussion of memory are documented informatively in von Leyden (1961). With the emergence of experimental psychology

(the first laboratory was founded in Leipzig by Wundt in 1879) memory became a prime target of systematic investigations (e. g., Ebbinghaus 1885), with contrasting new approaches brought about, as time unfolded, by Bartlett (1932), Lashley (1950) and Penfield (1975), to name only a few.

This brief, sketchy and patchy excursus into the history of the science of memory in the context of European research institutions underlines the strangeness of the conspicuous absence of concern for the science of memory in contemporary European semiotic discourse.

### 3. Sign processes as memory processes

While keeping in mind that the development of a science of memory is an on-going process, three possible bridges or anchor points between semioticians and the researchers who investigate the various forms of memory can be suggested: (a) a re-evaluation of the notion of semiosis in view of current neuropsychological knowledge concerning memory; (b) a reconsideration of semiosis in view of the development of evolutionary approaches in psychology; (c) a critical questioning of the communication model that pervades semiotics in view of alternative models provided by biological theories of imitation and contagion.

#### 3.1. Semiosis and memory

The notion of semiosis now pervades the semiotic discourse. It is used sometimes in a technical sense in relation to Peirce's system of thought, sometimes it refers more casually to the action of signs as opposed to a static vision of sign structures. In spite of these frequent uses semiosis remains a rather vague notion that minimally includes the idea of directionality, transitivity, mediation, transformation and, more generally, dynamism. But even if the (intensional) definition lacks precision, there is no shortage of examples. At least as far as primates, including humans, are concerned, semiosis is a process that is not conceivable in the absence of a brain. The state of knowledge in the cognitive neurosciences may be still short of a definitive answer to many problems, but there is nevertheless a wealth of recent

discoveries, which should allow semioticians to go beyond simplistic notions such as semiosis in their efforts to understand the processes that involve signs. A phenomenological description of any semiotic event reveals that all the memory systems which have been elucidated during the last few decades must be factors in such processes. Reconceiving semiosis in view of these memory systems reveals parameters, which remain conceptually invisible in the model as long as semiosis is understood as a general, all-purpose competence of the mind.

Let us take, as a typical act of semiosis, the reading of a multimedia message such as a comic strip (Gubern 1998) or a joke that involves a gesture as its punchline (Sebeok 2001: 115–119). The syntactic and pragmatic dimensions of such messages require the mental capacity of holding their simultaneous and immediate successive components in the unified structure of the task. But the acts of reading or joke understanding demand that other cognitive resources be available, some coming from the knowledge accumulated in the relatively recent past (e. g., recent political events), some belonging to a stock of data that have been stored for so long in the memory of the decoder that he/she does not remember when or how he/she acquired this knowledge. This applies to both the "knowledge of" (for instance the list of capital cities in the world) and the "knowledge how" (for instance how to read). Often, partial information such as the beginning of a sentence will trigger the automatic completion of a proverb, for instance, or the mention or vision of an object will trigger an association of a paradigmatic or syntagmatic kind. Looking at memory as a mere general competence that can be taken for granted overlooks the complex synergy of semiosis and its reliance on the memory systems that have been independently fine-tuned by evolution under distinct and specific environmental constraints.

Working memory, short term memory, semantic memory, long term memory, procedural memory, priming memory have been distinguished by neuropsychologists not for the sake of classification but because there is cumulative evidence that these events are supported by distinct brain architectures and circuitry since each of these functions can fail while the others continue to operate. Semiotics has not paid enough attention to the dysfunctions of communication and sense making. Roman Jakobson is the exception, although it is now recognized that he may have jumped too quickly to generali-

sations (Jakobson, Halle 1956). What neurologists traditionally called dementia can be shown to be specific semiotic dysfunctions caused by various impairments of memory systems. Semioticians would learn a lot about semiosis if they were teaming up more efficiently with cognitive neuroscientists who try to make sense of the fine-grained pathologies of human cognition, which until recently were lumped together under the gross category of deep amnesia or dementia. A meta-analysis of clinical case studies by semioticians would undoubtedly yield data relevant to a better understanding of semiosis.

### 3.2. Evolutionary approaches in psychology and the science of memory

Early empirical research on memory assumed that the human brain was a *tabula rasa* and that the faculty of memory could be better tested with arbitrary, nonsensical sounds or patterns. This is what did Ebbinghaus in 1885, following Gustav Theodor Fechner's psychophysical methods for the study of the "higher mental processes" (Ebbinghaus 1964). The idea that associations can be created at will with the help of the proper method or through the open-ended happenings of experience remains at the base of the semiotic approaches that emerged at the turn of the 20th century. But it took time for alternative perspectives to gain scientific credentials. The most enlightening is perhaps the British psychologist Frederick Bartlett (1887–1969), a professor of experimental psychology at the university of Cambridge whose *Remembering: A study in experimental and social psychology* (1932) demonstrates what we would call now a marked semiotic sensitivity in as much as his experiments take into account the study of the conditions of organic and mental functions. Rather than aiming at a mere analysis of abstract, all-purpose mental structures, he tested memory with material that is of interest to humans as a species (let it be through linguistic or visual input). Bartlett acknowledged the evolutionary constraints that must have moulded the various memory competencies. In animal ethology, Konrad Lorenz (1981) focused on a similar sort of constraints by considering patterned behaviour as a result of the same evolutionary laws that created organs if only because, even if the brain evolved a general competence to learn, this competence remains determined by



the law of evolution, in the same manner as an omnivorous organism is only relatively omnivorous. From the contemporary point of view of evolutionary memory, memory cannot be a general competence that would be the result of a mere general plasticity of the brain. Each memory system must have evolved under specific selection pressures and, consequently, must be content-specific (Gallistel 1995; Desimone 1995).

A case in point is working memory, that is, the capacity to hold in awareness a bundle of relevant information with respect to a particular task or event. There are two sets of constraints on this system: first the limits of the sensorial input (i.e., the limits of the sensorial apparatus of *Homo sapiens*) and the limits of the capacity of the memory system both in range and duration (this capacity varies among individuals but has absolute limits that preclude the simultaneous consideration of a large informational set. The maximum capacity can be understood as being sufficient for survival in the physical and social contexts in which it has evolved. Another case in point is that some kind of information cannot be recorded but are forgotten beyond their echoic or iconic resonance as if the scratchpads, as some psychologists call these, were automatically erased by the system (Horowitz, Wolfe 1998; Ward 1998). Information that cannot be construed as meaningful is as interesting for semiotics as information that is construed as meaningful. Likewise for meaningful information that is not remembered, or remembered for a limited time.

### 3.3. Imitation as memory

The dominance of the communication model in semiotics both in its functionalist and its technological forms has reduced imitation to a special case of either forms: mechanical replications and functional equivalences. Imitation has been the focus of attention almost exclusively as an intentional, psychological, goal-oriented behaviour, mostly in the context of aesthetics under the name of mimesis or more generally as an instance of iconism. In the same way, mimetism has been treated as a special case of animal signalling. But the notion of imitation as a general process through which behaviour of any sort spread among organisms of one or several species has been the object of scant attention. Perhaps this is because contemporary semiotics has

developed under the umbrella of individualistic psychology and continues to carry an implicit teleological ideology of free subjects from whom emanates intentional communicative behaviour (the psychoanalytical perspective enhances rather than mitigates this focus on the individual). However since Gabriel Tarde's revolutionary theory of imitation, that stood as a nominalistic alternative to the sociological model propounded by Émile Durkheim, imitation and its obvious reliance on memory has been the object of isolated speculations adumbrating a different semiotic paradigm. One of the most serious problems raised by semiotic theories based on communication is that they do not fit well with evolutionist perspectives (Bouissac 1993). Many phenomena labelled as communicative are better described as imitative. It seems that this stream of speculation is now coming of age following its effective popularisation by Richard Dawkins who recognized his debt to George Williams' ideas when he coined the word meme. Since then, a powerful movement has developed under the name of memetics whose relevance to the main issues of semiotics is obvious. Terrence Deacon's *The Symbolic Species* (1997) offers an innovative integration of the concept of meme as parasite in an explicitly semiotic theory of the origin of symbols and languages. It amounts to a Copernican revolution in the understanding of signs and semiosis in as much as signs are conceptualised as agents, rather than passive tools, that exploit the human brain as a resource for their replication. Like in any parasitic relationship, the meme-brain coevolution presupposes that the initial resource — in this particular case, a memory resource — evolved under independent evolutionary constraints. This counter-intuitive theoretical vista can open the way to formulating hypotheses that could be tested in the context of what could be called "wet" semiotics — that is, semiotic research conducted in the neurological clinical laboratory — in contrast with "dry" semiotics, or "armchair semiotics" (Bouissac 1998a; 1998b).

### Conclusion

Obviously, I have relied in this paper on argumentative and meta-analytical strategies. The advantage of this combined approach is that it allows external information to constrain and control speculation and

thus to avoid the pitfalls of purely subjective evidence and thought experiments. However it is not either without dangers: (i) reasoning is on the one hand subject to cognitive illusions, and, on the other hand, it is to a larger extent than usually thought, historically conditioned by a particular *zeitgeist* or episteme; to perceive and appreciate information sometimes requires that we “unthink” basic knowledge we take for granted; (ii) the value of meta-analysis depends of how complete is the literature that is perused; not only is the selection of the corpus under the dependence of the individual preconceptions of the researcher but information comes prepackaged so to speak by disciplinary gatekeepers. Moreover, this information is couched in specialized languages often hard to decipher, and the experimental and theoretical landscape of a vast and diversified domain like the neurosciences is fast changing. With respect to the particular topic that has been the focus of this paper, two multidisciplinary scientific journals offer a wide array of research papers among which appear fairly regularly some articles relevant to the cognitive neurosciences, in particular to memory. These are *Nature* and *Science*. Should a breakthrough occur in the understanding of memory, or memes, it is more than likely that it would be reported in their pages. *The Annual Review of Neuroscience* and *The Journal of Cognitive Neuroscience* are also reliable sources of information for whoever wants to keep an eye on developments in the field. There also appears once or twice a decade a collective volume that provide state of the art knowledge in the neurophysiology of cognitive functions (e. g., Gazzaniga 1995). But, more importantly, there exist at least two journals devoted to memory research in relation to domains akin to semiotics: *Memory and Cognition* and *Memory and Language*. Both offer articles very relevant to the sort of problems that have been indicated in this paper.

To conclude on an optative note, it would make sense for IASS/AIS to endeavour to create a journal titled *Memory and Semiotics*, whose function would be to develop much further the interface between semiotics and psychology (developmental psychology, neuropsychology, cognitive psychology, computational psychology, and whatever other subspecialties and emerging paradigms that may appear in the near future). This would provide both a focus and a forum for many younger researchers interested in constructing

productive interfaces between the rich speculations of semiotics and the methods of the empirical sciences.<sup>1</sup>

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<sup>1</sup> An earlier version of this paper has been presented at the conference on *Semiotics and the European Heritage* (Dresden, February 1999), and a recent version at the conference *Memory from Transdisciplinary Perspectives: Agency, Practices, and Mediations* (Tartu, January 2007).

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### Семиотика как наука о памяти

Понятие культуры предполагает, что алгоритмы, которые оформляются в ходе социализации ребенка или (в меньшей мере) в ходе ассимиляции иммигрантов в новое общество, довольно стабильны. Семиотика культуры пользовалась для осмысления этого процесса понятиями знака и знаковых процессов, считая память в качестве определенной способности (*affordance*) мозга само собой разумеющейся, не спрашивая, как и почему знаки вообще могут постоянным образом влиять на поведение человека. По правде говоря, находящаяся под влиянием структурализма семиотика создала только выдающиеся синхронные описания. Динамическими моделями пользовались для описания действий знака (т.е., семиозиса, диалогизма и диалектики) и результатов этих действий — изменений в культуре и культурное многообразие. Все же эти модели оставались довольно абстрактными и отделились от реальных мозговых процессов. В то же время именно мозговые процессы связаны с возникновением, сохранением и изменениями культуры. Семиотическая терминология внесла большой вклад в систематическое понимание объектов и процессов культуры, в то же время философский фон основных понятий семиотики не позволяет продуктивно сотрудничать с когнитивными дисциплинами нейрологии, которые в течении последних десятилетий достигли значительных успехов в понимании памяти. Цель настоящей статьи — обратить внимание на факт, что дальнейшее развитие семиотики требует перехода от философских и лингвистических понятий к биологическим и эволюционным моделям.

### Semiootika kui mälu teadus

Kultuuri mõiste eeldab, et algoritmid, mis kujunevad välja lapse sotsialiseerumise või (ehkki vähemal määral) imigrantide uude ühiskonda assimileerumise käigus, on suhteliselt stabiilsed. Kultuurisemiootika on

selle protsessi mõtestamiseks kasutanud märgi ja märgiprotsesside mõistet, pidades mälu kui aju teatud lubavust (*affordance*) iseenesest mõistetavaks, küsimata endalt, kuidas ja miks suudavad märgid üldse inimese käitumist püsival moel mõjutada. Kui aus olla, on strukturalismi-mõjuiline semiootika jõudnud vaid väljapaistvate sünkroonsete kirjeldusteni. Dünaamilisi mudeleid on kasutatud, analüüsimeks märgitoimeid (st semioosi, dialogismi, dialektikat) ning nende poolt tekitatud kultuurilisi muutusi ja mitmekesisust. Siiski on need mudelid jäänud kaunis abstraktseteks ja on reaalsest ajuprotsessidest kuidagi eemaldunud. Ometi on just ajuprotsessid need, mis on seotud kultuuride esilekerkimise, püsimise ja muutustega. Semiootiline terminoloogia on andnud suure panuse kultuuriobjektide ning -protsesside süstemaatilisse kirjeldusse, kuid semiootika põhimõistete filosoofiline taust on teinud võimatuks semiootika produktiivse lõimumise kognitiivsetega neuroteadustega, mis on viimaste aastakümnete vältel teinud märkimisväärsed edusamme mälu mõistmisel. Käesoleva artikli eesmärgiks on juhtida tähelepanu asjaolule, et semiootika edasine areng nõuab üleminekut filosoofilistelt ja lingvistilistelt mõistetelt bioloogilistele ja evolutsioonilistele mudelitele.

## **Time, change, and sociocultural communication: A chronemic perspective**

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**Abstract.** The temporal orientations of any sociocultural grouping are major factors comprising its central identity. The manner in which the past (memories), the present (perception), and the future (anticipation/expectation) are commonly articulated also concern cultural identity. The identity of a cultural group is altered by developmental changes in time keeping and related objective, scientific temporalities.

Three modes of temporality, objective, narrative, and transcendental, congruent with different kinds of brain processes, are common throughout our planet. Objective temporality tends to alter and replace traditional narrative and transcendental (spiritual) time, timing, and tempos. Objective temporality is concerned with what is transitory, modern and “progressive”. Objective time is not a traditional form of cultural time; it is a derived Westernized scientific imposition, rather than any cultural formation. This essay develops a new conception of how semiosis occurs. All information is essentially rhythmic, transduced through sensory systems as signals in a space-time domain, but deposited for use into a spectral thermodynamic domain in the human cortex.

A “chronemic” perspective, (temporality as it is based in semiotic processes related to human communication) is assumed throughout. Such a perspective appears to be somewhat novel in both communication and semiotic studies.



## Introduction

Time study is a very important area of inquiry. All communicative behavior has an underlying temporality, as time in its many forms is central to human beings and their lives. The temporal transformations of the globe concern change, rates of change, and kinds of change as well as adaptations or resistances to change. Change is basically a temporal notion concerned with brain processes. What is new to a person within any sociocultural contact situation is what his or her brain will reject or acquire. Certain aspects of brain studies are included under another title to outline a new way to understand perception or semiosis.

It is quite clear that each sociocultural collective can be characterized as having a distinct psychological time configuration in terms of the relationships between their pasts, their presents, and their futures. These differences, as well as several other very important traditional temporal processes, have not been adequately addressed in semiotic and communication theory studies. Each sociocultural grouping exhibits unique temporal signals, symbols, beliefs, attitudes, values, and motives (Bruneau 1977, 1987, 1988, 1996). Time study requires interdisciplinary focus as well as a focus on neglected historical texts. The study of time is ripe for developing new communication theory.

Chronemics concerns the study of human temporality as it is semiotically communicative. This study includes many levels of human experience and not merely how people objectify, categorize, and thingify time keeping. Human processes are deeply embedded as temporalities. All genetic, biological, perceptual, psychological, social, or cultural processes show, indeed, that we are *homo temporalis* (Bradley 1973). Throughout the years, a few studies have been presented or published covering many areas of temporality in an attempt to build a "chronemics" (Bruneau 1973, 1974, 1977, 1979a, 1979b, 1985, 1987, 1988, 1990, 1996). Hall developed early ideas about time studies and was highly influential in the development of time and communication studies (Hall 1952, 1960, 1966, 1983).

The literature on human time experiencing is voluminous and complex. The appearance of Julius T. Fraser's anthology, *The Voices of Time* (1966) and the publication of the proceedings of a conference sponsored by the New York Academy of Sciences in 1966, *Interdisciplinary Perspectives of Time* (Fischer 1967), initiated a generative

impetus toward the study of human time experiences. These early thrusts provided the impetus for the creation of the International Society for the Study of Time. This writer has been a member of this group for the past 30 years. In 1991, the journal *Time & Society* (1991–) appeared, focusing on social aspects of temporality. Recently, *KronoScope: Journal for the Study of Time* (2001–) was launched by the International Society for the Study of Time. A close examination of the interdisciplinary time literature, however, shows that some scholars in philosophy, physics, biology, and some other fields of study have dedicated themselves to time study and its mysteries long before the advent of these publications.

This essay attempts to bring together some concepts of time experiencing study as they could possibly be applied to semiotic and sociocultural communication. In turn, we will consider the need for and the neglect of human time study, the steady spread or diffusion of objective time keeping and its limiting assumptions, implications of recent brain studies, and some considerations about the dynamics of communicative entrainments (adjusting to strangeness) and synchronicity (sharing similar tempos).

### **The need for and the importance of time study**

While a “chronemics” of human communication is occasionally mentioned in the communication studies literature about time as a nonverbal characteristic, it is often only related to a few popular ideas such as being on time, waiting, being late, monochronic as opposed to polychronic time (Hall 1960, 1966), and punctuation (Watzlawick, Beavin, and Jackson 1967). However, there has not been any sustained or serious focus on human temporality in communication or semiotic studies. I have often claimed that it is not space that is the hidden dimension of human communication (Hall 1966), but it is time that is hidden and is a major aspect of all areas of semiotic or nonverbal communication. Time, timing, and tempo actually seem to integrate areas of nonverbal communication not previously considered related to time, i.e., proxemics, kinesics, paralinguistics, haptics, oculosics, olfaction, and gustation. All are essentially temporally wave-based, rhythmic, and neural semiotic processes.

In the past, statements were collected about the need to study time in human conduct, (see below). Around 1990, these statements came to a halt and an increase in the study of time and human relations began. The last significant statement about the need for social and psychological time study, that I am familiar with, is that of McGrath and Kelly:

Although time has been given considerable attention in philosophy, and in the physical and biological sciences, it has been given remarkably little attention in the social and behavioral sciences in general, and in psychology and social psychology in particular. In mainstream social psychology, time has virtually been ignored. (McGrath, Kelly 1992: 399–400)

Some scholars in their fields of study begin the study of temporality by discovering its all-pervasive importance and, then, realize that they are exploring and charting exciting new territories. The attestations to the importance of time studies have not been heeded to-date in communication or semiotic studies, but these attestations spanning several decades are important to understanding the value of incorporating time study in human contact studies. These statements below are important because they not only show a continuing lack of scholarly focus, but a continual and present need for time study in human relations.

Long ago, Frank stated that,

Perhaps no area is more in need of exploration for its temporal implications than the field of human conduct and none offers more promise of fruitful reward for imaginative speculation, since all human conduct [...] is conditioned by [...] the time perspectives of the individual and his culture [...]. (Frank 1939: 294)

Innis (1952: 57) observed that, “A neglect of the time problem implies a lack of interest in theoretical problems”. Hall stated that, “Americans are perplexed by people who [operate without clock time] [...] we can no longer neglect other conceptions of reality” (Hall 1959: 138). Polak (1961: 138), in discussing variable future perspectives, said, “Each cultural epoch has its own unique fitting images of the future [...] certain types of [people] hold certain types of visions”.

The sociologist Moore (1963), stressed the need for communicative and social time study four decades ago:

Conceptions of time are distinctly variable from one culture to another. Yet the ordering of social behavior has received only sporadic or intermittent attention by the sciences dealing with man [...] The focus on time as a central feature of order and sequence [...] is so minimally developed that no one has even invented a name for a science of the temporal dimensions of social life. (Moore 1963: 5)

Doob (1971: 63) noted that, “All aspects of time that are standardized within a society — the modal information, standards, perspectives — may be utilized as clues to understanding the significance of many forms of behavior”. According to Cohen (1971: 153–154), “A scientific world picture with pretensions to comprehensiveness cannot refuse to reckon [...] with the experience of time”. Maxwell observed that:

Anthropological theorizing about time perspectives and time-reckoning schemes is still in the formative stage. The cross-cultural study of time has not yet been given a name, nor have ‘schools’ of thought about the subject emerged within the discipline. No anthropologist is known as a specialist in time studies. (Maxwell 1972: 47–48)

Fisher (1978: 79–80), a communication theorist, commented that, “Time is, without doubt, one of the most crucial, yet most neglected variables of communication [...] [a] failure or unwillingness or inability to deal with the complexity of time, its varied aspects and dimensions”. The social temporalist, Zerubavel, noted that, “While time is definitely one of the most central dimensions of the social world, it has so far been relatively neglected by sociologists [...] as a topic in its own right”, (1981: ix; also see, Zerubavel 1979, 2003). In his revolutionary book, *The Dance of Life: The Other Dimension of Time*, Hall (1983: 184) stated that, “In this book, I have done my best to sketch the outlines of what will someday be an active, important major field of study, with significance to everybody”. However, Hall’s book on time has never gained any import in communication studies, as did his previous texts, and it is seldom cited by communication scholars. McGrath and Kelly (1986: v) asserted that, “The study of time at the social-psychological level is important. It is relatively uncharted area, with new ideas awaiting researchers at every turn. It is a topical area too long neglected. And, we believe, it will be even more important in the future.” Maines lamented the scarcity of temporal focus in sociological theory:

To purport to engage in an act of sociological inquiry is to commit oneself to the investigation of temporality [...] it is a basic mechanism through which social acts, organizations, institutions, cultures, and social structures exist and operate [...] there can be no genuine sociological theory [or semiotic and communication theory] that does not contain an underlying theory of temporality. (Maines 1987: 303)

What is amazing about all of these important calls for consideration of time study in the semiotics of interpersonal, social, and cultural communication contexts, is that few of them have been heeded at this date and a relative lack of focus on human temporality currently continues in these area studies.

It is not just the idea that time study is terribly complex; it is also a matter of assumptive neglect. The neglect assumes that: time is what a clock does; personal, social, and cultural dimensions of time are not real or valid; scientific uses of objective time are valid and natural to human living. However, Priestly observed that Westerners “hypostatize” time, “[...] to give actual existence to a concept [process, act, event, etc.] abstracted from our experience of succession” (1964: 53). It is typical of English and other Northern European languages to objectify and spatialize reality, to thingify. Word frequency counts find the words “is,” “it” and “thing” to be some of the most used words in English. So, we often say “What time is it?” instead of saying “What is time?”

Our linguistic concepts about tense and syntactic systems (not to mention punctuation and juncture) impose a bias toward the objectification of time as spatial. When we use prepositions that imply temporal meanings, such as when we say, “at this point in time,” “across time,” “change over time,” “ahead of time,” “behind time,” for example, we assume that they are small and simple words. However, these small and seemingly simple prepositional words bring into being a vast host of semantic and epistemological assumptions, (see Bree, Feddag, and Pratt 1993) for a more elaborate discussion of time and prepositions). These assumptions, for instance, are inherent in diffusion theory (how innovations are filtered and flow from supposedly progressive societies to less progressive ones) as outlined by Rogers (1995). Most communication scholars take only a scientific, objective time approach to their studies. But, in doing so, omit time as highly variable. The position here is that, instead of objectifying time, we should consider “change” as being an important definition of time.

Our definition here is that change is equated with temporal variability. Time expands and contracts, necessarily, as a very basic human condition necessary to brain processes as will be shown under another heading.

More change or novelty as information means that time is experienced as going faster, the less change, the more time seems to drag in reference to clock time. Time varies with the speed, amount and complexity of information volume, a ratio of *deja vue* (already seen) and *jamais vue* (novel or new) information. "In-formation" means "formation within," and this definition has consequences in how we understand the importance of brain studies. It is also well known that novelty produces highly attentive states, making one's time appear to flow faster, while boring information makes one's personal time appear to drag. An exciting lecture seems to move the hands of a wall clock faster, while a highly boring lecture seems to develop a lethargic or frozen clock. Also, the Law of Janet can be understood as follows: how long a moment is, is inversely proportional to the length of life already lived. So, to very young children, time seems to drag, while elderly persons feel that time is flying by. This condition concerns the amount of oxygenated blood flowing to the main cortex and the lowering of brain temperature as people age. If we equate change with time, then to speak of "change over time" can seem ridiculous, even if it is a hallmark of science. It is not very well understood that scientific methodologies are often deeply assumptive about human temporality.

Objective forms of temporality current in diffusion, developmental, and sociocultural concepts concern time keeping and time-tables (daily timing and calendrical scheduling). Sociocultural kinds of temporality, however, concern how people change, resist change, adapt to change, expand and contract the present, enact memories, and imagine any futurity.

All sociocultural time concerns subjective temporalities, the rhythms of social interaction, as well as psychic temporal orientations. Personal time concerns the unique temporalities of each individual (Bruneau 1977, 1985, 1988, 1989, 1996). All of these temporal distinctions are implied in any concern with diffusions of novelties across cultures as well as most developmental and sociocultural communication contacts. While there are marginalized people in every sociocultural grouping, most individual tempos often reflect those

exhibited in one's primary reference groups. There are, however, common temporal norm violations and problems.

The notion of "time" is often assumed in technologically advanced societies to be what clocks and calendars and their extensions do. It will be argued here that all technologies, especially those based in media transmissions, are merely extensions of clock time, which is the basic medium of all technological media. Yet, tremendous numbers of people spread throughout the globe do not wear watches on their wrists. Investing money into the clock-making industry is still a good idea. Clocks, calendars, and time zones actually are not what time is; they tend to eliminate natural human time, the subjective temporality of individuals and cultural groupings. This is especially important in understanding those global groupings that can be conceived as "traditional". To assume that the clock is time is common and necessarily convenient to the evolution and diffusion of Western scientific objectivity and lineal reality parading as "modern progression" globally, a growing linearity. The oldest and most persistent "innovation" in a global context is that of objective time related to time-keeping assumptions. An excellent reference on the "semiotics of wristwatches" is an article by (Freake 1995). However, a huge literature exists on the concepts of "time keeping".

### **Objective, scientific, and technical time**

The clock is the master machine/device of all scientific and technological developments. McLuhan (1964: 143) once observed that, "Clocks are mechanical [or electronic] media that transform tasks and create new work and wealth by accelerating the pace of human association". Almost all of our modern communication technologies concern faster and faster and more and more contacts between people in both their work and private lives. Gonseth commented that:

One speaks as if [...] the indispensable observation clocks were entirely made [...] One seems to forget that this clock has not dropped out of the skies, but that it had to be put together, and that this could be done by an audacious anticipation, by laying down as correct the very laws of mechanics that it would serve to submit to observations. (Gonseth 1972: 289-290)

Mumford noted that, "The clock [...] is the key machine of the industrial [and the technological and electronic] age" (1962: 14) and "The first characteristic of modern machine civilization is its temporal regularity" (1962: 269). An early alarmist, Wright (1958: 7), noted that, "This is a history of an increasing, unchecked, and now intolerable chronarchy [...]. Let chronarchy, then, be not merely 'rule by time', but 'regimentation of man by timekeeping'".

Clocks are created to produce lineally assumed equal intervals in a cyclic sequentiality, (the Newtonian equitable flow without reference to anything else), which in turn helps people to regularize and coordinate divergent personal and sociocultural rhythms. Modern, so-called progressive societies would collapse without a common time keeping. But, when Einstein was asked for a simple definition of "relativity", he said, "When you sit with a pretty girl for an hour it seems like a minute; but when you are on a "hot seat" for a minute it feels like an hour. That's relativity" (Kugelmass 1967: vi). Actually, Einstein was really making a sexual comment about highly attentive states as contrasted with physical heat upon biological processes. Actually, he often saw relativity in terms of biological time, rather than the time of physics. His viewpoint was that personal time, or what he referred to as "I-time," cannot be measured. But, increasingly, biological rhythms are measurable as noted in the increasing study of chronogenetics and chronobiology. Biological needs become drives, if not satisfied. Biological needs create biologic drives that alter both the expansion and the contraction of momentary experience. All biological needs and processes have temporal variations, including heart and breathing rates related to semiotic interactions. Much more study of sociobiological processes should yield important insights for semiotic studies.

Communication theorists and researchers have not dealt with temporality as complex processes, neglecting especially the idea of human relativity. We will refer to relative temporality as "narrative consciousness" (see, for reference to time and narrative, Ricoeur 1984, 1985, 1888). To neglect relativity is to live in an objective world. This can be troubling because it prevents new thinking about human interactions. Clocks, timing devices, and objective time constructions can occasionally be coordinate with the sociocultural rhythms of the young, the elderly, and most of the world's population who are not yet on the Internet, but frankly, such coordination is rare.



The British psychologist, John Cohen (1966: 252) noted that, “[...] it is conceivable that our reliance on watches and other artificial aids [to timekeeping] has led to an atrophy of our sense of time”. The identity of many people concerns how they measure up to a clock or clock-like “pacers”, a “clock insanity” can develop (Bruneau 1974). Much of Westernized public interactions take place in an objective time angst or with quick glances at clocks and objective time references of many kinds. Pointing to the clock as time itself, as an independent, but constant variable (a contradiction, because there are *no constancies* in a human processual world) is the first resistance to temporality as a complex dependent variable. Startings and stoppings, beginnings and endings, before and after, zeros and ones, etc., are elusively complex and assumptively fixated only as objective time impositions and assertions. However, these tend to regularize our temporal perceptions and estimates. As Berg stated, “If the aim pursued by the clock would be realized, there would no longer be time [as subjective or personal]. For time is the inequality of dimensions [...]. An honest clock is thoroughly complete in its attempt to eliminate time”, (Berg 1970: 111–112). Further, as Whitrow (1972: 27) cogently observed, “The mechanization of time helped to disassociate time from human events and helped to perpetuate a belief in an independent world of science”.

John Dewey said:

Individuality conceived as a temporal development involves uncertainty, indeterminacy, or contingency... The mystery of time is [...] the mystery of the existence of real individuals [...]. Genuine time [...] is all one with the existence of individuals as individuals, with the creative, with the occurrence of unpredictable novelties [or changes]. (Dewey 1940: 204–206)

Personal, social, and psychological temporalities, then, are genuine kinds of time. Clocks do not measure time; they measure assumed empty spaces, and actually tend to help spatialize human rhythms and processes as statically invisible. What seems to have escaped the purview of diffusion of innovation, developmental, and sociocultural communication theorists is the greatest diffusion of innovation ever on the globe: the slow and persistent diffusion of Western forms of objective time. This global innovation has been increasingly spreading a different kind of temporality for several hundred years. Objective time is in the media, the channels of TV, the satellites, the computers, and all forms of new technology. These common devices of most

technologically developed nations are not used by the great majority of the world's population. When peoples from various cultures do come to use these devices, they change their customary cultural acts, events, occasions, etc. Technological and objective temporalities tend to significantly alter sociocultural rhythms and tempo.

It was said previously that diffusion theory concerns how new ideas and products are accepted or rejected in different global regions by individuals and their groups. Diffusion theory appears to be epistemologically consistent in the adoption of a linear progression model as the very basis of its theoretical assumptions (Rogers 1962, 1983, 1995; Rogers, Shoemaker 1971; Rogers, Kincaid 1981). From a Western viewpoint for the purposes of research, for accountability in terms of diffusion rates, for S-curve production, for the success of a diffusion (novelty or change), and for the need to assess overall results, such a linear approach seems natural and justified, if one values objective temporality. After all, corporations and governmental agencies expect to know as much as possible about efficiency as well as on-going success and knowledge of results for difficult and expensive efforts.

It is understood here that such a linear, objective time view, when diffusions flow into various sociocultural collectives, can and does have indigenous sociocultural time resistances and even hostility. These resistances, according to Rogers, are important. Rogers noted that, "Until we study resistances, they cannot successfully be overcome. So, diffusion of innovation scholars should devote more attention to studying resistances to innovations" (Singhal, Law 1997: 43). In selecting and planning for innovation acceptance across sociocultural boundaries, it should be noted that temporal compatibility and predictability (futuraity) within a traditional sociocultural collective must be considered as major factors as resistances. As Rogers aptly noted in an interview, "It is one thing to study an innovation that has diffused after it has done so. It is much more difficult to predict its diffusion" (Singhal, Law 1997: 43). Such an accurate prediction centers on further understanding of the neglected temporal differences, the basic *human* rhythms, of target sociocultural audiences.

### **Sociocultural rhythms (cultural time)**

Cultural time concerns the unique and characteristic temporal environments of particular sociocultural groupings great and small, formal and informal. Each traditional sociocultural collective develops a unique style of temporality. The rhythms of everyday life, of language, of communicative interaction, of nature, the rhythms created in people built environments, and all nonverbal or semiotic behaviors are built upon genetically and metabolically driven biological rhythms (Bruneau, 1980, 1985, 1987, 1988, 1989, 1995b, 1996, 1997). The position here is that all semiotic information is rhythmically-based; light waves, sound waves, pressure waves, molecular waves, and chemical waves aid in the creation of both individual and cultural time. Sociocultural rhythms, from birth to death, are inducted into each and every individual, into his or her everyday life, with rhythms arising from one's collective and its many rhythmicities. Sociocultural time also concerns how a collective develops a past, a present, and a future as its psychological time shared by its members. Authentic time is how change changes, how dynamic here-and-now processes vary, how there are kinds and rates of change, and how authentic human time concerns the unique and divergent temporalities of individuals interacting rhythmically within sociocultural collectives.

All cultural groups tend to develop unique, indigenous codifications of a naturalistic time (sunsets, siestas, when the birds first sing in the morning, when birds or fish return etc.) not necessary to clocks. Time reckoning by celestial bodies, the indigenous accounting of the rhythms of nature and the seasons, and biological events have evolved for many, many thousands of years where people have not needed a clock to tell them that they are hungry or that it is time to change their wakefulness. The manner in which the past is codified in language, in nonverbal communication, in rituals, in ceremonies, in dances, in songs, etc., varies considerably from one cultural group to another. There are many kinds of "histories", not simply one history as defined by Western societies. Mythic history is common throughout the globe and Western history is no exception. Each religious grouping, too, has its past codified as a permanent exactitude leading to a happy or sad hereafter. Quests for permanency are commonly, but differentially, balanced with the processual flight of impermanence everywhere.

It is not possible here to fully discuss sociocultural rhythmicity. However, three classical scholars of time and sociocultural change seem to nicely summarize what should be minimally said. Leonard Doob (1971: 49–60) outlined a series of propositions about temporality in social and cultural perspectives. Some of them are:

Periodic changes in the external milieu invariably and everywhere provide the potential for acquiring knowledge concerning the duration and succession of intervals and for the arousal of temporal motives. (49)

All persons everywhere are oriented periodically toward the past, the present, and the future. (52)

Modally within the person, within significant groups, and within the society as a whole, one temporal perspective rather than another is likely to be facilitated. (54)

The modal temporal perspective of a society reflects and affects a modal philosophy of values pertaining to other behavior. (56)

The stronger the temporal perspective, the weaker the orientation in other directions. (59)

Each society provides appropriate information for passing temporal judgments. (Doob 1971: 60)

Lomax offers us one of the keenest and distinct descriptions of cultural rhythmicity:

Rhythm is, after all, a prime mover in social relations. Rhythmic patterns facilitate the co-activity of groups and aid their members in coordinating energies and resources in work, nurturance, defense, social discourse, rites of passage, interchange of information, and, above all, expressive acts. The important role of rhythms in group behavior suggests that we can view the rhythmic aspects of communication as essentially social in nature — a system that binds individuals together into effective groups and links groups into communities and polities. Each such “rhythmic style”, passed on generationally, shapes many aspects of each cultural tradition. (Lomax 1982: 149)

Semiotic, linguistic, built environment, and social rhythms are inducted or channeled into the brains of individuals (see below). Fraisse (1963) describes a process of “rhythmic induction” whereby energy wave fields as rhythms are acquired by individuals developmentally. Holonomic brain theory, below, describes this process more thoroughly. Thus, the individual acquires the sociocultural rhythms of his or her social order for better or for worse. Fraisse (1963: 40–41) elegantly describes this process: “Rhythmic induction permits living

creatures to turn reflex reactions into reactions of anticipation [...]. The existence of organic rhythms induced by periodic variations in the environment has particular psychological consequences for [people]. They provide [them] with an internal clock”.

Induction concerns, of course, how brain operations and systems of perception or semiosis are temporal processes in interactions between nowness (attentiveness, presentness), memories, and forebrain processes. These temporal brain systems are analogously approximate to all environmental rhythms and simply codify and, then, regulate our adaptation to them.

### **Brain differences across cultures**

It is only possible here to briefly sketch some ideas about brain differences and the reader is referred elsewhere for further information (Pribram 1971, 1986, 1990a, 1990b, 1991, 1993, 1994, 1999, 2003, 2004; Bradley, Pribram 1995; Pribram, Bradley 1998; Bruneau 1985, 1988, 1989, 1995a, 1997).

Holonomic brain theory and research (Pribram 1990b, 1991, 1999, 2004) and “connectionist” brain theory (below), when integrated, help to explain why brains differ from one individual or cultural grouping to another. Holonomic brain theory deals with how rhythmic and wave-based energy fields in any person’s various environs are converted and transduced or channeled as signalic to brain area cortices. Signalic (semiotic) conductions, as nerve impulses in the regular “space-time domain”, are then slowed, converted, and synaptically spread as thermodynamic transformational patternings in an analogic, algebraic, “spectral domain” in the main cortex and several others thinly covering some mid-brain organs.

Holonomic brain theory concerns how extremely complex, dynamic and vibrant lakes of energy or holoscapes (holograms if measured) interact with other such “configurations”. Each cortical neuron is connected dendritically with approximately ten thousand other neurons. It is in the many millions of synaptic connections, working in aggregate, that we find the brain’s re-presentation of any semiotic signal. The description concerns thermodynamic transformations coupled with brain circuitry connecting various brain areas and medial brain organs. Within synapses are microscopic structures called

“microtubuals”. Within the microtubuals are neurochemical processes that create photon emissions (Jibu *et al.* 1994, 1996; Pribram 1990a, 1991, 1993, 1994, 1999, 2003, 2004). Thus, the main cortex of the brain concerns complex thermodynamics, but the nature of meanings and consciousness concern many puzzles as to how thermodynamic photon emissions or cortical “light” relate to meanings. How thermodynamic energy is related to systems of consciousness is highly speculative at this juncture. But, a kind of superconductivity has been speculated about “thinking”. It is also important to consider that “minding” concerns in-formation or formation within, but “matter” or immediate reality concerns ex-formation, (Pribram 2004). The main cortex is connected to mid-brain organs and other sub-cortical structures by built in brain pathways or circuitry. We will discuss some of these important pathways below under the subtitle “Three brain axes”.

Connectionist brain theory develops the idea that the “mind” is not initially in the brain, but is carried within the energy-based rhythms (semiotics) of any individual’s natural, people built, and sociocultural environs to be acquired (see, for example, Fischer 1989, 1990, 1992, 1996; Freeman 1995; Varela, Thompson, Rosch 1993). The individual brain maps upon the messages (the mind) of its sociocultural rhythmic environments. So, perceptions as rhythmicities (semiosis) from the sociocultural collective are transduced or impinged upon individual brains within an initially limited freedom of choice. But, each individual has a unique genetic and biological thrust against its environmental rhythmic configurations and restraints. Each child projects against its surrounds differentially and developmentally increases his or her projective, top-down brain axis. The brain “represents” (makes present again) the rhythms of energy patterning previously acquired through usage (repetition and redundancy are very important). The stored habitual energy analogically maps onto rhythmic stimuli present in the three-dimensional world of matter or ex-formation (Pribram 2004). The mapping is never exact and creates individual and unique experience. It is “in-formation”, or “formation within” which is compared to new experiences as cyclic (in *and* out) perception. It is recursivity and inhibition that concerns regularity and one’s re-ality (all again) or stable environment. Novelty or learning concerns attending to rhythmicities that vary from our individual stabilities or exformations, “matter”.

The new paradigm is: the brain is the "medium", the mind is the "message", and communication is the "means". The brain is the medium of all other media. This obvious fact is not sufficiently appreciated for its revolutionary import. Most scholars seem to think that what carries a message is its media. But, this is a terrible assumption because it is the brain that processes information, media devices only *transmit* information, but only the brain processes formations within. Cybernetic developments are making inroads into these processes. The brain is central to all information. How the brain is constructed (self-organizing theory) is similar in every culture and person, but males and females have brain chemical, biological, anatomical, and consequent usage pattern tropism differences that can account for many sociocultural gendered communicative differences (Bruneau 1995a, 1995b, 1997, 2000; LeVay 1993; Loy 1986; O'Keefe, Nadel 1978).

Every child is born into some kind of sociocultural collective and is exposed or not exposed to other collectives. It is the collective (the mind or messages) that develops sociocultural rhythms that are channeled into individual brains; the rhythmicities are transduced through sensory systems and hippocampal screenings that sort out novelty from habituation. This process is described further below in considering three brain axes. From a connectionist brain perspective, the "mind" is carried in the sociocultural collective and deposited purposively or haphazardly into individual brains. It is human communication, semiotic contact and exchange, that provide the means whereby any individual becomes a member of a particular mind already existing in his or her environmental surrounds. The mind is acquired however haphazardly or efficiently within the restraints or opportunities afforded in every sociocultural collective.

Brain differences across cultural groupings are real and involve how energy is habitually and repetitively patterned into the brains of its members with the inevitable presence of signalic noise, as well as forgetting. It is complex temporal regularities or patternings that create brain differences from one sociocultural collective and one individual to another.

### Three brain axes

Brain differences not only involve the regularized rhythms to which persons are exposed, but also to the habitual interactions of three major brain axes. The functions of these axes and their stylized usages and interdependencies create different kinds of consciousness from culture to culture. These major axes dynamically intersect and create a person's consciousness within his or her sociocultural collective. These axes can be described as: "bottom-up—top-down; "left—right"; and, "back—front" (Pribram 1998, 1999, 2003).

"Bottom-up" deals with how all energy is wave-based and is "input" or formation within the brain. It concerns all stimuli from our senses and our soma transduced and conducted to the brain. The "top-down" axis concerns how the brain *projects* previous habituations upon bottom-up processes to create interfaces. We project upon receptions; this is the essence of semiosis. It is an "in *and* out" process, rather than an "in *or* out" process, as behaviorists would have it in their brainless endeavors. Thermodynamic energy within the brain from previously collected and stored rhythms is projected upon and interfaced with energy being transduced. The hippocampus helps to map and screen information, allowing novelties to accend to the cortex and ignoring habituations (O'Keefe, Nadel 1979; Isaacson, Pribram 1986). We imagine reality to be only external to us and stimulus-response theory and behaviorist interpretations have created this mythology. Behaviorism study has not included brain study, but a future neurobehaviorism seem probable. All formation within is cyclically and recursively connected with current stimuli projected within the sociocultural collective. Some brain formations are detrimental to a person, some are liberating. Sociopathic rhythmicities are easily mapped upon brains to become problematic in any social or cultural grouping.

The "left—right" axis deals with processing information that is integrated between the two major hemispheres (Efron 1990). The richly myelinated corpus callosal and septal bridges between the hemispheres allow for extremely quick interactions and are not meant to separate the hemispheric processes, but to conjoin them. The left hemisphere is the objective, sequential, area of the brain. The left hemisphere does not usually act independently from the right hemisphere, but can do so in the processing of linear, ordinal, and



sequential information. Most men seem to be often unable to sustain and process information well in the right hemisphere. The right hemisphere is the attitudinal, emotional, intuitive, and feeling area of the human brain. The right hemisphere concerns flow of experience, narrative, and analogically-based, emotive information processing. Men and women differ significantly on the integrations between the hemispheres and habitual usage patterning. Women have richer connections between the hemispheres and appear to be able to process emotional and intuitive information better than men (Bruneau 1995a, 1995b, 1997).

The “back—front” axis is as important as the “left—right” axis (Pribram 1998). The “back” concerns reference memory usage in the parietal areas and connects through mid-brain organs with the frontal lobes. So, the memory reference area of the brain (past) is connected to the frontal lobe areas (futura), involving attentive readiness, expectation, prediction, forecasting, planning, and anticipatory forethought, etc.

The circuitry and structures of the mid-brain connect these axes to define a person’s “re-ality” (all again) at any given moment (Bruneau 1988, 1989, 1995a, 1996, 1997, 2000). The rhythms of the natural and celestial environments are inducted into the brain along with the rhythmicities of the social and constructed environments. Many people in so-called “developed” countries have actually lost contact with the narratives of natural environments or these environments are completely ignored or have been or are being destroyed. Technological time is mainly left-brained and concerns objectivities processed in the left parietal lobe (back) and sequenced in the left fronto-orbital lobe areas (front) as planned futurity. It concerns unitized sequentiality and is called “objective consciousness”. It is generally egocentrically operational, logically or illogically so. It develops slowly in boys and is the reason why boys go over big waterfalls in small bad boats. Left brained sequential planning takes years to develop, but thinking “ahead” is an art form in great need of development through education. The development of the frontal lobes in long range planning is a recent phenomenon, developmentally and historically.

The right hemisphere processes attitudes, feelings, emotions and a flowing narrative of experiencing in conjunction with certain mid-brained circuitry. It concerns empathic forethought and intuition; it is

allocentrically (other-directed) construed and involves empathic feelings into others semiotically and thoughtfully (Bruneau 1988, 1989, 1995b, 1996, 1997, 2000). Most cultural groupings are still more narratively involved in *familia* and the collectively mapped mind; this concerns what can be called, narrative consciousness. It also includes metaphoric flow, aesthetics, poetics, life stories, and literary modes, etc. (Ricoeur 1984, 1985, 1988).

Modern technological media are mainly left-brained operationally, but can instigate narrative (e.g., words can create poetic, artistic, and metaphorical flow). Technological or objective time utilizes left-brained unitizations and predicated sequentialities that are uncommon to the vast majority of the global populations. It is a Western kind of thinking and relating. Modern communication technologies are being rapidly diffused into groupings whose traditional members are based in narrative consciousness, but the children or grandchildren are into cyber worlds, thinking and behaving differently than their cultural groupings. This is an unappreciated aspect of the so-called, "digital divide", a mismatch in brain consciousness usage across sociocultural boundaries. Traditional sociocultural rhythms mainly concern habitually narrative and analogically based information processing (personal and social temporalities); technological time concerns objectivity, rationality, order, structure, etc. only infrequently practiced by older members of a sociocultural grouping. A number of avenues into time and cultural studies are reported by Bruneau (1979b, 1980, 1990, 1995b, 1997; Merriam 1983). Some of the more recent works that deal with the problems of objective time in contrast with traditional cultural or narrative time, for example, are: a study of the time of a northern Philippine community (Pertierra 1993); traditional Sicilian time (Morello 1997); forced exposure to Western time in traditional Japan (Ikuko 1997); time travel among the Crow (Barnes 2005).

### **An energy-based model of human communication**

When a person enters another sociocultural grouping as a stranger, he or she is a novelty and the new sociocultural collective is a novelty to the person, a double novelty or double strangeness occurs. This increases the uncertainty and creates tension fields (dysrhythmia) as temporal differences become apparent. What happens, then, when

people from objective consciousness groupings communicate with those from a narrative and/or a transcendental consciousness group?

We should understand that an "innovation" can be an object, a device, a product, an idea, or a new person in another person's regular sociocultural awareness. A person can be and often is an innovation, a novelty, a temporal strangeness. So, on the cover of Rogers' fourth edition of his *Diffusion of Innovations* text (1995), is a photograph of a drop of water that has created an innovation (waves flowing outwardly in ripples through the water medium (the sociocultural collective). Actually, this is a very credible, but simplified, model of what happens when a new input is accommodated in the human brain. We must understand that the human brain is what changes and must change in the world of differences across cultures. Let us examine how energy is involved.

Fourier, a French mathematician, visited North Africa on an expedition with Napoleon. Upon his visit he consulted with some Arab mathematicians. They showed Fourier how a pebble dropped into a pond created wave fronts that could be intersected with other wave fronts from other rocks dropped. It was shown that waves intersected, interacted. Also, waves could back propagate from the boundary shores and create more wave fronts. In holonomic brain theory, the boundary enfold distributions of holoscapes appear to be similarly constructed (Pribram 1991). So, in a field of thermodynamic wavelets intersecting, we can imagine analogically how holoscapes are created in the human brain. Every wave created can be traced back to its original force and velocity (stones hitting the water) at any intersect of the wave complex. This is a characteristic of holographic formation within.

Brain holoscapes are Fourier transformations, huge networks of brain aggregates working together in a spectral domain, a thermodynamic complexity (Pribram 1991). Every neuron in the cortex is connected simultaneously with an average of 10,000 other neurons through dendritic, synaptic connections. So, with a brain averaging something on the order of 80 billion cortical cells, with each cell connected to approximately 10,000 other cells, we can imagine a great complexity of holoscapes interconnecting exponentially. Holoscapes are algebraic representations of previous usage patterns of perception; these patterns of perceptions (habits of perceiving) are what each sociocultural interactant brings to a communication contact with

strangers. So, what are mapped upon every human brain are kinds of wave-based information from perceptions within their rhythmic environments, their built, social and natural collectives. The acquired and active brain energy transformations are projected recursively and cyclically upon both new and old rhythms contained in the bottom-up stimuli from an individual's biological and sociological rhythmic surrounds.

Sociocultural contacts between strangers bring different holoscapes from culturally different people into the interaction as unknown or unresolved entrainment tensions, dysrhythmic interactions, hopefully with eventual attempts to synchronize with one another.

The hippocampus in connection with the human cortex creates a mapping function similar to what was previously said to be a blocking of the defunct reticular formation. So, the brain conserves its energy by screening out information that is old hat or already common. When a stimulus is new, an innovation, a different kind of person, a visitor to an unusual cultural group, this newness can be resisted, ignored, or accepted into new brain pattern imaging. When a new perception is accommodated and allowed to enter the human cortex, the cortex must be adjusted to allow the difference to be integrated. This is called "entrainment", or attempting to adjust to a new difference. Once the difference is adjusted and integrated, it can be called a synchronicity or dealt with as people being somewhat in "synch".

Brain patterns that are used over and over create more stable and less changeable holoscopic patterns or memories. Dogmatism, closed-mindedness and rigidity of consciousness can negate new information attempts to create a restructuring of the holoscopic energy fields. This is what learning is all about. The "plasticity" or the ability to reconstruct brain patterns after injury or after habituation is important. Rigidity in perception implies that brains can be wired up in the sense that software becomes more like hardware. *Deja vue* information concerns habitual processing while *jamais vue* information concerns dishabituations (novelty). The challenge for any innovation or change across cultures is to first assess the habitual rhythmicities in a sociocultural collective and, then, to plan on how new rhythms can be projected into an already existing kinds of perceptual and psychological time, a stranger's temporal perception and consciousness.

Interestingly, Bradley and Pribram (1995) have attempted to connect the energy transformations in the brain with social communi-

cation networks. They were trying to show that what is networked within brain transformations is reflected in networks of social rhythms with some congruence. Such a connection between the rhythms of society and the rhythms of a brain within that society is credible in a recursively cyclic model of perception. Pribram and Bradley (1998) have also attempted to connect brain processes with a hidden personal self (an "I") in contrast with an expressed public self (a "me").

All media is the medium of the brain. The brain is the medium of all communication, regardless of how information is transmitted. What else could be the medium of media? New technologies do not mediate brains and temporal differences across cultures. It is the other way around: brains mediate all technological media transmissions and these transmissions are integrated or not integrated in sociocultural communication transmissions. Any sociocultural communication problem must be understood as differences in brain activities, perceptual (non-verbal or semiotic) codes, and systems of consciousness. This is a basic and primary effort that is in great need of further support from semiotic and communication scholars.

### Summary

It was shown that there is a need to include time study in sociocultural communication and semiotic study and that a neglect of time study has occurred. Sociocultural rhythms are combinations of objective and subjective temporalities. The more modern and technological a sociocultural collective, the more formalized are its objective time perspectives; the less modern and technological a sociocultural collective, the more that narrative forms of experiencing, of consciousness, and subjective temporalities will define the spatio-temporal characteristics of a grouping. It must be understood that some members of a collective operate within a spiritual or transcendental temporality (Bruneau 1988, 1989, 1995a). Transcendental kinds of consciousness are often extensions of narrative consciousness and utilize quasi-linear or non-linear contemplative or meditative brain processes.

The temporal characteristics of a group are mapped upon and within the brains of its individuals. Holonomic brain theory and its integration with connectionist brain theory offer explanations about how people can reject or resist the adoption of the differences (no-

velties) encountered in sociocultural as well as person to person communication. Differences between objective time and subjective time concern differences in temporal styles of consciousness. These differences have to do with the rhythms of innovations and the rhythms already mapped upon the societal mind and imposed upon or accepted by individuals. It is suggested that semiotic and communication theorists in diffusion, developmental, and sociocultural communication studies integrate temporal concepts into their thinking and research in future years.<sup>1</sup>

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### **Время, изменение и социокультурная коммуникация: хронемический подход**

Временные ориентиры являются основными составляющими ядерного идентитета каждой социокультурной группы. Способ, которым обычно выражаются прошлое (воспоминания), настоящее (перцепция) и будущее (ожидания, надежды), тесно связан с культурным идентитетом. Изменения в способах измерения времени и развитие объективных научных подходов к проблеме времени меняют и идентитет культуры.

На нашей планете существуют три основных модуса темпоральности (*temporality*): объективная, нарративная и трансцендентальная. Все эти три модуса связаны с разными мозговыми процессами. У объективной темпоральности наблюдается тенденция изменить традиционные нарративы и трансцендентальное (спиритуальное) время, временное членение (*timing*) и темпы. Объективное время соотносится со всем проходящим, настоящим и «прогрессивным». Объективное время само по себе является не традиционной формой культурного времени или продуктом культуры, а скорее изображением Запада в точных науках.

Настоящее эссе пытается представить новое понимание истоков семиозиса. Любая информация в своей сущности ритмична и передается нам сигналами по сенсорным путям в пространство-временном измерении, но затем сохраняется для дальнейшего употребления в спектральном термодинамическом измерении коры мозга.

Вся статья написана в «хронемическом» ключе, т.е. временность рассматривается с точки зрения семиотических процессов, связанных с человеческой коммуникацией. Такой подход можно считать новым как в теории коммуникации, так и в семиотике.

## **Aeg, muutus ja sotsiokultuuriline kommunikatsioon: kroneemiline lähenemine**

Ajalised orientiirid on iga sotsiokultuurilise üksuse tuumidentiteedi põhiliseks koostisosaks. Viis, kuidas minevikku (mälestusi), olevikku (taju) ja tulevikku (ootusi/lootusi) tavaliselt väljendatakse, on kultuurilise identiteediga tihedalt seotud. Aja mõõtmise viiside ning nendega seotud objektiiivsete teaduslike ajakäsitluste arengumuutused muudavad ka kultuuri identiteeti.

Meie planeedil esineb kolm põhilist ajalisuse viisi: objektiivne, narratiivne ja transtsendentaalne. Kõik need kolm viisi on seotud erinevate protsessidega ajus. Objektiivsel ajalisel on tendents traditsioonilisi narratiive ning transtsendentaalset (spirituaalset) aega, ajastust ja temposid muuta. Objektiivne aeg seostub kõige mööduva, modernse ja "progressiivsega". Objektiivne aeg ise ei ole kultuurilise aja traditsiooniline vorm ega kultuuriline saadus — pigem on ta Lääne täppisteaduslik kuvand. Käesolev essee püüab pakkuda uut arusaamist sellest, kuidas semioos tekib. Igasugune informatsioon on oma olemuselt rütmiline ning antakse meie sensoorseid juhteteid pidi signaalidena edasi ajalis-ruumilises alas, kuid seejärel talletatakse see edasiseks kasutamiseks ajukoore spektraalsesse termodünaamilisse alasse.

Kogu artikkel on kirjutatud "kroneemilise" lähenemise võtmes, see tähendab, et ajalisust käsitletakse inimsuhtlusega seonduvate semiootiliste protsesside pinnalt. Taolist lähenemist võib pidada uudseks nii kommunikatsiooni- kui semiootikauuringis.

## **Semiotic autoregulation: Dynamic sign hierarchies constraining the stream of consciousness**

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**Abstract.** For all human sciences, understanding of how the mind works requires a new theory that starts from the assumption of potential infinite variability of human symbolic forms. These forms are socially constructed by the person who moves through an endless variety of unique encounters with the world. A theory of symbolic forms needs to capture the essence of hyperdynamic, irreversible nature of the stream of consciousness and activity. The human mind is regulated through a *dynamic hierarchy of semiotic mechanisms* of increasingly generalized kind, which involves mutual constraining between levels of the hierarchy. It is demonstrated that semiotic mediation leads to a *triplet of personal-cultural constructions* — a *new symbolic form*, a *meta-symbolic form*, and a *regulatory signal* to stop or enable the construction of further semiotic hierarchy. In everyday terms — human beings produce new problems, together with new efforts at solving them, and make decisions when to stop producing the former two. Hence, semiotic mediation guarantees *both* flexibility and inflexibility of the human psychological system, through the processes of *abstracting generalization* and *contextualizing specification*. Context specificity of psychological phenomena is an indication of general mechanisms that generate variability. Scientific investigation of human psychological complexity is necessarily oriented to the study of variability within the individual person's psychological time-space.

*I have created the world in thought  
Hence I am greater than thought  
But I worship thought  
Is this not surprising?*

Ramamirtham (1986)<sup>1</sup>

Human beings are amazing — they create subjective worlds of high complexity — and take it to be objective reality. They organize their mental realms through continuously creating hierarchies of semiotic mediating devices. These devices regulate their relations with their immediate environments by giving meaning to their extra-actions that change the environments, and intra-actions that change their own subjective worlds. Persons create deeply subjective and abstracted from the immediate life meanings — which are at times personified in terms of deities — various “personal gods” for whom shrines can be constructed (Oliveira, Valsiner 1997; Valsiner 1999). Other persons — a Juliet for a Romeo, or film star for an adolescent — may become vehicles for such construction of hyper-generalized personal sense systems that operate with holistic field-like signs (Valsiner 2005, 2006). Pictorial images of idealized “social others” — Baoule “wooden spouses” (Ravenhill 1996; Vogel 1997) or images of the madonna in Catholic homes — are iconic signs for regulating one’s own self. All of these cultural forms are symbolic resources (Zittoun 2006, 2007; Zittoun *et al.* 2004) that function as external regulators of the intra-psychological cultural domains. The acts of *Psyche* operate through a multi-faceted process of semiosis in which persons set their goals, and act in ways that give meaningfulness for their movement towards these goals (Rosa 2007; Salgado, Gonçalves 2007).

At the same time, the realities of the social world guide the persons towards some — rather than other — objectives (Valsiner 2007). The ancestors are to be honored, political leaders are to be followed, despised, deposed, or elected, wars are to be fought as activities of “patriotic duty”, and children made for the sake of self-fulfillment, “reproductive success”, or for replenishing the human resources of a given social order. In the theatre of human living, we are actors and

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<sup>1</sup> Quoted via Eichinger Ferro-Luzzi 2002: 128.

spectators at the same time. We — as unique individuals with hard to penetrate layers of defense of our privacies — are at the same time completely dependent upon the resources of the semiosphere that we live with. Our personal uniqueness is the result of our social belonging. At that boundary of persons' relations with the signs-infested environments, persons create ever new signs and use these for creating further personal uniqueness. How does that happen?

### The generic personal act of semiosis

In the generalized form, such acts of personal-cultural creation can be summarized by the following:

the *person* constructs *meaning complex x*...



...*objectifies* it by *fixing its form*...,  
(e.g. internal — internalized social norm, or  
external — monument, picture of deity, figurine)



...and starts to act *as if* the objectified meaning complex *x*  
is an external agent that controls the *person*

It is here where culture enters into the human *psyche* — and infinitely complicates the construction of the sciences of the human mind. All scientific terminology — similarly to its everyday counterpart — is in fact a version of such regulating system. It is that part that is meant to objectively and abstractly explain the complexity of our psychological phenomena — a scientific theory is a kind of a mental cathedral that stands in the center of the booming and buzzing confusion we call living a life.

## Homage to Henri Bergson: uniqueness of irreversibility

The philosophy of Henri Bergson is perhaps too famous to be advanced further. This happens when a particular thinker becomes hailed as a guru figure by all too ardent followers — who fail to see that his (or her) ideas are only unfinished sketches of a bigger picture of understanding the complex nature of what is being studied.

When the educated public in Paris tried hard to get to Bergson's presentations in early 20th century — and gossiped about his mysticism of the *élan vital* — the major role he played in the advancement of the developmental science may have been overlooked. In his *Creative Evolution* (1945 [1907]), Bergson synthesized the basic knowledge about language, evolution, and development that came out of the 19th century thought, and created the basis for the 20th century developmental science. The key figures of that science — Jean Piaget and Lev Vygotskij (to mention just a few) picked up the ideas and put them to practice. Yet much of it has gone forgotten — and that forgetting has hindered the development of sciences over the past century.

### Adaptation is apprehensive

A central concept important for a developmentally open cultural (as well as evolutionary) psychology was Bergson's notion of adaptation. That concept — popular as it was (and is), can carry different meanings. First, it has been seen as direct reaction to the conditions that are causing change — either “positive” (by way of giving rise to new variations) or “negative” (elimination of misfitting emerged variations). Bergson disagreed with both of these meanings — on the basis of the mechanistic nature (Bergson 1911a: 63). Instead, he focused on adaptation as the *process of emergence of novel mechanisms* in ways *coordinated with* context demands. Thus — adaptation does not mean that environment “molds” or “shapes” the organism. Instead, the environment *triggers the emergence of new forms* — biological and symbolic alike. These forms go beyond the demands of the here-and-now environment, rather than “fit with” it.

Thus, human psychological development of the higher psychological functions leads to new organizational forms that make it



possible for the human beings to encounter new *possible* conditions in the future. Of course the demands of the future cannot be pre-set in the present — even with full knowledge of the past. Hence the emergent new forms are crucial in bridging the past and the upcoming future (Bergson 1911a<sup>2</sup>).

In sum — in the case of creative adaptation, the organizational forms that emerge in adaptation go beyond the “fit with” the present state of the survival conditions, and set the basis for facing the challenges of the possible future demands.

Bergson’s notion of becoming was expressed on the material of human personality in his characteristic ways:

Our personality, which is being built up at each instant with its accumulated experience, changes without ceasing. By changing it prevents any state, although superficially identical with another, from forever repeating it in its very depth [*En changeant, elle empêche un état, fût-il identique à lui-même en surface, de se répéter jamais en profondeur*]. That is why our duration is irreversible. We could not live over again a single moment, for we should have to begin by effacing the memory of all [*souvenir de tout*] that had followed. (Bergson 1911a: 8; French versions inserted from Bergson 1945 [1907]: 23)

[...] to foresee consists of projecting into the future what has been perceived in the past, or of imagining for a later time a new grouping, in a new order, of elements already perceived. But *that which has never been perceived, and which is at the same time simple, is necessarily unforeseeable*. Now such is the case with each of our states, regarded as a moment in a history that is gradually unfolding [...]. It is an original moment of a no less original history. (Bergson 1911a: 9, emphasis added)

Bergson’s emphasis on the role of acting upon one’s environment as functional in development sets him up as a forerunner of our contemporary activity theories — starting with those of Pierre Janet (e.g., Bergson, 1911b: xix, 151, 229, etc.; for an analysis of Janet’s activity theory see Valsiner, van der Veer 2000). The traditions of Bergson and Janet played a crucial role in the development of the Russian cultural-historical school of thought of Lev Vygotskij and Aleksander Luria (van der Veer, Valsiner 1991).

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<sup>2</sup> Discussion of canalizing involved in vision — Bergson 1911a: 105–108; and in the role of concepts in canalizing conscious processes — Bergson 1911a: 305–308.

The issue at stake here is the constructive use of the history of scientific thought. The ideas of the past thinkers are not just “museum specimens”, but examples of the construction of epistemic tools. Some of the “old” construction ideas surpass some of our contemporary ones — and vice versa. Bergson’s ideas were well ahead of his time, as they attempted to capture a very crucial side of human mental dynamism.

### **Maintained stability of the hyper-dynamic mind**

In the world of social sciences that tend to fight the perils of “Cartesian dualisms”, it would probably sound old-fashioned to make the simple claim — *the human experience is dual*. Its duality is that of the unity of stability and dynamism. The human mind maintains itself as open-ended and dynamic — its socially organized forms (stability) operate in always unique contexts that are given by the irreversible nature of time (the dynamics of forms). Combining these two within one single theoretical framework would entail the creation of a substantive science of social being. This task is still ahead for our contemporary social sciences. The difficulties here are theoretical, rather than practical (or social).

Experience that proceeds within irreversible time, and is dependent upon constant interchange with the environment, entails indeterminacy that defies prediction and control of future outcomes. Instead, it is filled with constant emergence, proliferation, and extinction of ‘intermediate gestalts’ (in terms of the classical theory of microgenesis — Valsiner, van der Veer 2000: ch. 7). So, in other terms — most of the human meaning-making process is not directly reflected in the static (final) symbolic forms — but vanish without trace during the process of construction of such forms. The easy availability of outcomes of symbolic construction hides the processes that produce these outcomes. This feature of our access limitations to relevant phenomena is most clearly visible in the case of rating scales and questionnaires (Valsiner, Diriwächter, Sauck 2005; Wagoner, Valsiner 2005).

This feature of the mismatch of the process and outcome within the human mind invalidates the hopes of pragmatist philosophy — which uses consequences — or ‘final gestalts’ — as the criterion of truth.

For pragmatism, consequence (surviving experience) proves the rightness of the survival process — yet from these consequences we cannot analyze the ways of producing them (Valsiner 2000). Pragmatism attempted to unite the focus on the dynamic processes of experiencing with static evaluation of these processes (through outcomes) — a conceptual task of utmost complexity. They failed — as they could not consider the relevant feature of signs — their capacity to create new signifying possibilities, or their ontopotentiality (Valsiner 2002). The power of signs has been conceptualized in theoretically productive ways by another thinker — who as often been considered to belong to the “pragmatist tradition”<sup>3</sup> — Charles Sanders Peirce.

### **From duality to triality: the functional infinity of semiosis**

Life experience — viewed within Bergsonian time — is infinite — until the moment it ends. How can we look at the proceeding experience as the time never allows for repetition of it? There is a basic feature of all organic matter: it is being born from the past, and the opposite idea — the past emerging from the future — cannot take place. This recognition is also at the foundation of James Mark Baldwin’s “genetic logic” (Baldwin 1906): development cannot be represented by convertible propositions ( $A \rightarrow B$  is not  $B \rightarrow A$ ). The irreversibility of time breaks the symmetry (Prigogine 1973). Furthermore — duality of an opposition is not sufficient for explaining the emergence of novelty — a third component needs to be added to an oppositional duality to make it transform into a new form (Nöth 1994: 44–46). Human lives are not governed by dualities — even as these are its compositional units — but by *trialities*<sup>4</sup>. A triality is a temporal-structural unit which entails two mutually related opposites (duality) together with the structural conditions of its own transformation into a new form (which includes the maintenance of the old form). Figure 1 gives the generic structure of triality.

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<sup>3</sup> Which he himself tried to avoid.

<sup>4</sup> It would be very interesting to see if the current habitual fights in the post-modern social sciences against “dualisms” become transformed into similar bashing of “trialisms”.

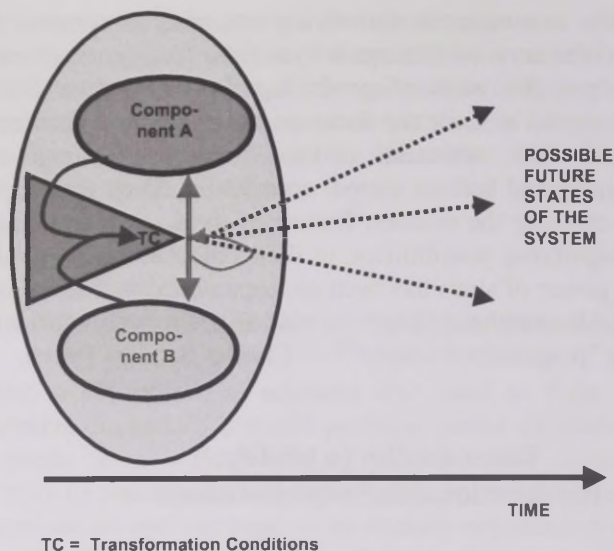


Figure 1. The generic structure of triality.

The centrality of “thirdness” in semiogenetic processes has been recognized in many areas of inquiry (Marcus 1997). It has been brought into psychology on its developmental and cultural sides (Marková 1990; Rosa 2007). The notion of triality opens the way for scientific discourses to consider the open-ended nature of developmental phenomena. Their structure is *deterministically indeterministic* (Valsiner 1997) — it has the current structure (with its history) that is expected to result in new versions — unpredictable in their specifics, yet predictable in their fact of being novel.

#### Roots of triality: C. S. Peirce

It is here where C. S. Peirce’s semiotics meets the needs of developmental sciences. Peirce superimposed the mathematical demonstration of infinity from a geometric realm to that of time. If one were to explain infinity in case of dividing a line into sub-segments, this division (which itself is a discrete act of dividing a whole into two parts) process can be

continued infinitely, with the result of dividing the line into infinitesimally small (and ever smaller) sub-parts. If, instead a geometric figure (line) there is the time, the time too can be divided into similar infinitesimally small segments (moments). Thus, the present in the infinitesimal time moment between the past and the future. As such, the experiencing organism cannot perceive it as "the present". All perception of the present, and reflection upon it in ideas, is already the *next* present's reconstruction of the immediate past.

The notion of the present is a boundary in the personal division of the past and future. For Peirce, "...the present is half past and half to come" (Peirce 1892/1923: 219). The moving boundary of the present is not that of a co-presence of the past and the future (as some kinds of existential "surfaces"), but a *process of emergence*. Peirce recognized this difference of the flow of consciousness-in-time (Peirce 1923 [1892]: 220).

How does the "birth of the next present" take place in the psychological domain? Peirce emphasized the role of *generalization* that operates between the fields of past re-constructions and future expectations. Development for Peirce entailed limitation of possibilities within a field (Peirce 1923 [1892]: 221). Peirce solves the problem of generalization through the notion of association:

A finite interval of time generally contains an innumerable series of feelings; and *when these become welded together* in association, the result is general idea. [...]

The first character of a general idea so resulting is that of *its living feeling*. A continuum of this feeling, infinitesimal in duration, but still embracing innumerable parts, and also, through infinitesimal, entirely unlimited, is *immediately present*. (Peirce 1923 [1892]: 224, added emphases)

The person can overcome the limitations of the present through generalizing an idea reaching out into the past and future. Yet the general idea is immediately present in the form of a general feeling, in the boundary of the present. Signs operate in ways that prepare the sign-maker to face the next moment.

## Autoregulatory and heteroregulatory sign processes

The duality of human mind is paralleled by the *triplicate* nature of signs that regulate that mind. A use or invention of a word depicting something is not only referring to the denoted referent, but presenting that referent for some purposes, directions.

For instance, if I tell you that “this article is printed on white paper”, I am not merely reiterating the obvious (which the reader can see anyway), but presenting that aspect of the environment for some purposes. I need not have specific goals while making such statement, yet the statement (about the obvious) is simultaneously *re*-presentation, *co*-presentation, and *pre*-presentation (Valsiner, 2001a; 2001b; 2002). The message is therefore necessarily ambiguous — in terms of *re*-presentation it is true and obvious (the paper seems white indeed), while in terms of *co*-presentation it raises the question of “why is he pointing our attention to *this particular*<sup>5</sup> fact?”. Last (but not least) — the *pre*-presentation entails communication about the future state of the object (“...but the paper will become yellow in 100 years” or “...but it is the waste of trees to make the paper on which this article is printed”).

### Three levels of sign regulation

How does a meaning-maker regulate one's mind? The semiotic/ historical view on signs considers those to be constantly *oriented towards the immediate future* of the present psychological processes. Signs function in parallel to accomplish three functions — maintain themselves (autoregulation), maintain their immediate next level signs (or lower psychological processes), or terminate further meaning-making (Fig. 2).

If we look at the Level N sign (in Figure 2), which can generate a higher level (N+1) meta-sign, or relate to other level-N signs, aside from regulating the subordinate process, then we see that each sign can be involved in three relations of autoregulatory kind at the same

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<sup>5</sup> Out of all possible features of the object to be emphasized. Specifically as we live in a pleromatic universe the possibilities for immediate *co*-presentation by the Sender and the Recipient are wide. So are their different interpretations of the message (Bühler 1934).

time (downwards, upwards, and horizontally). While controlling and canalizing the flow of lived-through experience the signs are involved in “networking” (with other signs) and generalizing. Abstractive generalization is the basis for human empathy (Worringer 1911) and thinking (Bühler 1934). The person is ready for subjective synthesis in making sense of the world based on the mutuality of immediate life experience and pre-established meaning fields.

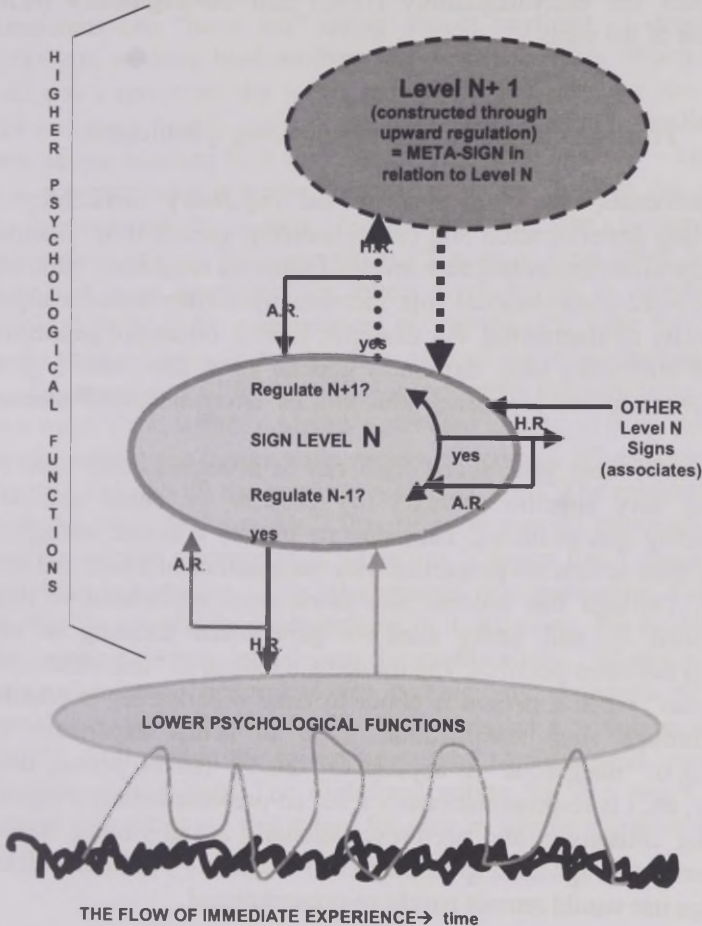


Figure 2. Summary of the autoregulation (A.R.) and heteroregulation (H.R.) by signs in a dynamically changing semiotic hierarchy.

The triality of the autoregulatory processes guarantee that any level of signs cannot be isomorphic with the lower processes (nor with one another). Here an interesting side issue is worth mentioning. Psychologists have disputed the issue of “consistency between behavior and self report”, usually lamenting that such consistency is low. From the present viewpoint, low consistency is a necessary result from the role signs play in regulation of conduct. To expect full consistency here (i.e., that self-reports “fully and accurately” depict behavior) would deny both the heteroregulatory (H.R.) and autoregulatory (A.R.) functions of the signs.

### From generalization to contextualizing specification

Two processes can be present in the regulatory hierarchies — abstracting generalization and contextualizing specification. Abstracting generalization creates new levels of semiotic regulators, removing the re-co-pre-presentational role increasingly further towards higher complexity of abstraction. For example, human values are generalizations of abstracted kind. Extremely general terms like “love”, “justice”, “freedom” etc are meaningful in their overgeneralized abstractness.

As such, these generalized signs can be brought to bear upon regulating very specific contexts (by process we could call *contextualizing specification*). They operate in very concrete settings — linking their abstracted properties with the specifics of a here-and-now setting. Through this process any momentous application of long-established — and rarely used — generalized meaning in new contexts becomes possible. The immediate feeling of “this street looks dangerous” when a person is about to enter a dark alley is possible only through such specification. Prior to actual experience the meaning of “dangerous” as applied to “this X” (street, person, drug, activity, etc.) is re-presentationally a lie, co-presentationally a sign for checking consensus, and pre-presentationally a self-guiding device. We operate through such specification all the time — without it all our language use would remain purely re-presentational.



What is *fun*?

Consider a very “trans-Atlantic” example — you may find many North Americans talking about something vague — yet (for them) very concrete — the notion of *fun*. That term is heard in social discourses in America all the time — and its collective-cultural power is precisely in its vagueness. Nobody can exactly define that term, but its use is possible across an immense variety of concrete contexts. So, Americans can “have fun” doing almost anything — from doing nothing to working hard on their self-created hobbies. When you are eating at a restaurant the waiter may come and ask “*are you having fun with your steak?*” and you may be uncertain what is implied. You hear people boasting how some event was “*a lot of fun*” — and again it is uncertain what it means. People can set up “fun” as the criterion for improvement (by making “*having more fun*” one’s personal goal-orientation) or even for competition (“*I want to have more fun than John*”). It is an open field for future psychologists to develop standardized methods for measurement of “having fun” (like there are so many standard methods for the study of anything in psychology).

The meaning of “fun” itself is in principle indeterminate, and in two ways. First, within a person’s personal culture, it is an abstracted overgeneralization from a wide variety of personal life experiences of the past, linked with the language notion of “fun”. The contrast here is with the opposite (“non-fun”) that helps to specify boundary of the two for specific referents (e.g. “X is fun, Y is not fun”). Secondly — and more importantly — for interpersonal communication, the notion of “fun” is completely indeterminate in its meaning, yet easily usable for creating a state of illusory intersubjectivity. Whatever is my personal-cultural background for making any statement, it is not revealed in the statement itself, which remains a widely open sign-“blurb”. Still, within the collective cultural world it does resonate on the side of recipients. The ill-defined notion *fun* is a result of subjective abstraction — and a tool for uses in any new contexts (specification).

## **Concluding point: Irreversibly constrained freedom for novel thinking**

The dynamic function of the triplet — new symbolic form, meta-symbolic form, and regulation of the depth of hierarchy — creates a powerful mechanism of meaning making that adjusts well to many new contexts. Signs constrain actions, feelings about actions, and their own actions upon actions and mental processes. Yet they do not do it in a fixed way — instead of transitive hierarchies ( $a > b$ ,  $b > c$ ,  $a > c$ ) we may come across seemingly inconsistent intransitive hierarchies ( $a > b$ ,  $b > c$  and  $c > a$ ) of signs — and of the relations between sign makers and signs. Thus — indeed we construct thought, become guided by the thought — and yet our subservience to the thought that guides us is made up by ourselves (Valsiner 1999). The maker becomes the made and moves on to be the maker for the something new. Our life experiences are grown into our personal cultures. That makes human way of meaningful living possible. Personal cultures operate through semiotic abstractive generalizations that feed forward into re-organization of the social world — which then gives further rise to personal-cultural meaningfulness. Semiosis at the personal level is infinite in its constant production of novelty until the person lives. Human beings are consistent in their capacity for becoming inconsistent with their pasts. This provides them with a basis for adaptation that goes beyond the given environment. Such permanent transcendence is the essence of all living. Its human form is characterized by a new form of triality — that of creating a sign as if it had always been there in its givenness.<sup>6</sup>

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<sup>6</sup> A previous version of this paper was prepared initially as a seminar presentation at the *Seminar on Symbolic Forms* at École Normale Supérieure, Paris, February 6, 2004, and is available at [http://formes-symboliques.org/article.php?id\\_article=46](http://formes-symboliques.org/article.php?id_article=46)

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**Семиотическая саморегуляция:  
как динамические иерархии знаков организуют течение  
сознания**

Во всех гуманитарных науках для понимания функционирования сознания необходимо наличие новой теории, которая исходила бы из предпосылки, что количество символических форм в человеческой культуре в принципе бесконечно. Эти формы сознания порождаются бесконечным числом уникальных встреч человека с окружающим миром. Теория символических форм должна учитывать, что течение сознания и действие по существу являются гипердинамичными и необратимыми. Человеческое сознание регулируется динамической иерархией семиотических систем, причем каждый новый уровень в этой иерархии более универсален и отдельные уровни взаимодействуют между собой. Доказано, что семиотическое опосредование создает в конструкциях между отдельной личностью и культурой триаду: новая символическая форма, метасимволическая форма и регулятивный сигнал, который останавливает или инициирует возникновение следующего уровня семиотической иерархии. Выражаясь более простым языком, человеческие существа создают новые проблемы, а заодно и новые попытки разрешения этих проблем, и принимают решение, когда остановить генерирование проблем и их разрешений. Таким образом семиотическое опосредование путем абстрагирующего обобщения и контекстуализирующего определения одновременно укрепляет как гибкость, так и ригидность психологической системы человека. Зависимость психологических процессов от контекста является знаком наличия общих механизмов, создающих разнообразие. Исследование сложной психики человека обязательно должно сосредотачиваться на анализе многообразия психологического *хронотона* отдельных личностей.

**Semiootiline eneseregulatsioon:  
kuidas dünaamilised märgihierarhiad piiravad teadvusekulgu**

Kõigis humanitaarteadustes on teadvuse toimimise mõistmiseks vajalik uue teooria olemasolu, mis lähtuks eeldusest, et sümboliliste vormide hulk inimkultuuris on põhimõtteliselt lõputu. Sümbolilised vormid on sotsiaalselt konstrueeritud inimese poolt, liikudes läbi maailmaga ainukordsete kohtumiste lõputu hulga. Sümboliliste vormide teooria peab võtma arvesse teadvusevoolu ja tegevuse olemuse, mis on oma loomult

hüperdünaamilised ning pöördumatud. Inimese vaimu reguleerib semiootiliste mehhanismide dünaamiline hierarhia, mille iga uus tasand on järjest üldisem ning mille tasandid limiteerivad üksteist. On tõestatud, et semiootiline vahendamine tekitab üksikisiku ja kultuuri vaheliste konstruktsioonide kolmiku: uus sümboliline vorm, metasümboliline vorm ja regulatiivne signaal, mis peatab või algatab semiootilise hierarhia järgneva tasandi tekkimise. Ehk tavakeelsemalt: inimolendid tekitavad probleeme lahendades uusi probleeme ja uusi püüdlusi ning võtavad vastu otsuseid, millal probleemide ja lahenduste genereerimine järele jätta. Seega kindlustab semiootiline vahendamine abstraheeriva üldistuse ja kontekstualiseeriva määratlemise protsesside kaudu ühtaegu nii inimese psühholoogilise süsteemi paindlikkuse kui ka selle jäikuse. Psühholoogiliste protsesside kontekstispetsiifilisus on märk mitmekesisust loovate üldiste mehhanismide olemasolust. Inimeste keerulise psüühika uurimine peab tingimata keskenduma üksikisikute psühholoogilise aegruumi mitmekesisuse analüüsile.

## On spatiality in Tartu–Moscow cultural semiotics: The semiotic subject

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**Abstract.** The article views the development of the Tartu–Moscow semiotic school from the analysis of texts to the study of spatial entities (semiosphere being most well known of them). It comes to light that ‘culture’ and ‘space’ have been such notions in Tartu–Moscow School to which, for instance, the ‘semiosphere’ does not add much. There are studied possibilities to join Uexküll’s and Lotman’s basic concepts (as certain grounds of Estonian semiotics) with Tartu–Moscow School’s treatment of culture and space through the notion of ‘semiotic subject’. Such an approach allows to see transdisciplinarity, which has come to issue only during the last decade, already in the first conceptions of Tartu–Moscow School where transdisciplinarity revealed itself in the symbiotic use of ‘culture’ and ‘space’.

The Tartu–Moscow school of semiotics (TMS) has often been labelled as (the) one of cultural semiotics. Indeed, an article from the period until which semiotics had been dealt with in Tartu for nearly 10 years, appeared under the title *Theses of Cultural Semiotics* as the manifesto of the school (Uspenskij *et al.* 1973). This paper is definitely worthy of notice and a remarkable piece on bordering a paradigm in semiotics, which does not happen too often. On the other hand, if we look at further developments of the Tartu–Moscow thought in cultural semiotics, we can but conclude that neither ‘semiotics’ nor ‘culture’ were (or have been) understood as uniformly as to actually characterise a ‘school’ in a strict paradigmatic sense. There are five definitions of ‘culture’ and at least three (less implicit ones might be added) of ‘semiotics’ outlined in the *Conceptual Dictionary of the Tartu–Moscow School* (Levchenko, Salupere 1999), and this definitely does not look as a fact characterising a *paradigm*.

Thus, one may wish to look for other features that would allow us to speak about a real *school* or *paradigm* of thought. There is no doubt that 'secondary modelling systems' can be taken as the centre of TMS; sometimes the 'semiotics' of TMS is equalised with the study of either natural language or language-based sign systems (Revzin 1971). It is probably the occasional rigidity of TMS in its definitions that has made it possible to argue against its standpoints and key concepts (e.g., Sebeok 1988); there is, however, no doubt in that this rigidity has been — seemingly paradoxically — connected with heuristic innovativeness. It is clear that considering culture-genetic sign systems either as secondary or tertiary does not make any difference in respect to TMS's studies or its pretty vague methodology<sup>1</sup>. On the other hand, Sebeok's argument on such a difference ought to be kept in mind, if aspects resulting from the analysis of *Umwelt* were involved in the study of the cultural sphere...

### From text to (textual) space

There is another way to see and define the position of TMS. This may seem simplistic, but has definitely important consequences for both understanding TMS and using it in contemporary analysis of sociocultural phenomena. The topic under discussion is the one of juxtaposition or, more frequently, open contrasting of diverse phenomena, or — in advance — of dissimilar spheres, beginning from elementary binaries to the cultural level. Often, the inspection of sociocultural phenomena has been subjected to choice between the analysis of either *processes* or *structures* (see, e.g., Archer 1996). Semiotics, all the more TMS's cultural semiotics, has been associated with structuralism so repeatedly that it is not worthwhile to spend time and space on this in the current paper. We might, however, take TMS under inspection, and find out that while individual treatments have identified themselves with structuralist standpoints (e.g., Lotman 1970), the overall impression of TMS must be that of a synthesis of the functionalist (or processual) and structuralist approach. It seems clear that the structuralist approach favours the entailment of juxtaposing, at least it should not be surprising to meet the viewing of

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<sup>1</sup> Noting such vagueness in methods has no evaluative aspect here, but is due to the *ad hoc* nature of the development of TMS; see Randviir 2005.



texts, cultural phenomena or the world, in the end, as based on oppositions. Application of binaries has been a major feature of structuralists, be them either representatives of TMS, the Greimasian tradition, or others. While we can meet Greimas' devotion to the Aristotelian logical square under the notion of the semiotic square (Greimas 1987: 66, 78), and the appliance of it to diverse types of texts, in TMS thinking in binaries has been simpler — at least on the surface. There, however, is a common feature, if not a red line, in both conventions: be them categories of the semiotic square or binaries, the formative entities are univocally certain semantic or semiotic fields (in the sense of formal logic). In the TMS tradition, we can observe the use at least the following descriptive frames formed on the basis of binaries: culture—nature; culture—another culture; culture—non-culture; text—non-text; the textual—the extratextual<sup>2</sup>; textual world—extratextual world; I—(s)he; the own—the alien; etc. Even though these categories have been set in oppositions, and they do encompass non-identical inner components, it is hard to find, in TMS works, any other treatment of their relations than those acknowledging dynamism (following, basically, the developmental pattern of centre—periphery). This, in short, means that the structural view is, in TMS, immanently conjoined with the functionalist/processual ideology.

Now, if we understand the constituents of the above-mentioned oppositions as dynamic structures (e.g. semantic fields, textual bodies, physical phenomena), we can, in brief, maintain that TMS has, to a large extent, been a school of the semiotics of space. Thinking in/about spheres has been customary in TMS, beginning from 'textual spaces' to individual's identity or, at the end, the semiosphere. There are several features or factors we can bring forward as evidence in TMS that concur with the semiotics of space, and most of those characteristics are of keynote importance for the identification of TMS itself. The 'text', as a central notion of TMS, has a certain inner

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<sup>2</sup> It is important here to pay attention to difference between the English 'extratextual' and the Russian 'vnetekstovyi'. Whereas 'extratextual' may or may not include contextual or co-textual connections, the Russian original seems rather to indicate at a sphere differentiated from the 'textual' by a disjunctive boundary. At the same time, however, there occur also hints at the extratextual world as that composed of 'other texts'. For example, misunderstanding texts can happen in connection with "[...] non-understanding the significant orientation of a text as a whole (or elements of its global structure) towards other texts or the extratextual [vnetekstovyi] world" (Levin 1981: 88).

structure which is organised around or according to a certain dominant, the text is distinguished from the extratextual by a boundary... (Lotman 1969: 470f). The qualities of text can — and often have been — extrapolated to the level of culture, and thus, in the context of TMS, one would rather keep in mind the notion of cultural space. Cultural spaces are interpretable also from an internal viewpoint that takes into account communicative cohesion entailing a certain autocommunicative whole. From such an internal viewpoint, a basic criterion for the definition of a cultural space is the existence of self-explanatory self-models (or: 'automodels' — *avtomodelj*). Such self-models have, in TMS where autocommunication has always been highly valued, been explained and associated with textual terminology as follows — a self-model is:

A model of a given culture of itself which, as a rule, yields certain dominants in it on the basis of which there is built a unifying system that has to serve as a code for self-consciousness and self-identification of texts of the given culture. (Lotman 1971: 170)

An integrated cultural space, in turn, may be referred to as a textual conglomeration in which there goes on hermeneutic cultural movement where texts and metatexts exist in a dynamic cycle, where the cultural object-level and metalevel descriptions are interdependent. The so-called Petersburg text, for example, is "[...] one of the basic 'texts-interpreters' for the 'neomythological' works of the Russian symbolists" (Mints, Bezrodnyi, Danilevskij 1984: 80). At the same time, into the 'Petersburg text' there are included not only lexical texts, but also architectural, sculptural items (Mints, Bezrodnyi, Danilevskij 1984: 82). This means that semiotic and physical aspects of the city-space are joined in interaction.

On the other hand — space in text is:

[...] a modelling language by the help of which any meanings can be expressed as soon as they have the character of structural relations. Therefore spatial organisation is one of the universal means for the construction of any cultural models. (Lotman 1986: 4)

This opinion is one of those suggesting that the development of meta-language(s) in TMS has most frequently been extremely closely connected with objects in their so-to-speak innocent status on the

research table, before an actual analysis begins. As mentioned, ‘texts’ have often been replaced with ‘textual spaces’, ‘cultures’ with ‘cultural spaces’ already on the so-to-speak object-level in TMS (objects are defined with the preface of *as* even prior to analysis). Space, in this aspect, serves as a descriptor, and can be replaced by ‘system’, ‘mechanism’ (e.g., ‘system of culture’ as that of norms; cf., e.g., Zoljan, Černov 1978: 155, 162). This simplicity of replacing or loading objects of analysis with descriptive (or ideological, if you will) features prior to actual analysis has been admitted also by Lotman whose note can complement the above citation:

[...] space often obtains a metaphorical character by which metaphoricity is introduced into the language of investigative description. This is connected with that the notion of space itself contains a contradiction: it is filled with both mathematical and behavioural contents. This contradiction, in itself, may even play a supportive — creative — role, if it is recognised and purposefully used by the researcher. (Lotman 1986: 5)

Apparently, this understanding has made it easy for TMS to often talk about the above-mentioned textual spaces, whereas such textual spaces may extend to the field of describing behaviour, even lives of people, in textual terms. ‘Behavioural texts’ are, like any other cultural phenomena, built on natural language and belong, thus, to the realm of secondary modelling systems (see Lotman 1977: 66). Such phenomena are, in TMS’s works, described in entirely textual terms — dominant (or constants of behaviour), genre, sujet, style, etc. come to forth (Lotman 1977). The text is, in TMS, understood in broad terms and hints at phenomena created through secondary modelling systems based on natural language. Maybe surprisingly, such a logic draws attention to the proximity of TMS to any other discipline (e.g. cultural anthropology) studying cultural or sociocultural phenomena in merely other terminology. It stands in the theses of cultural semiotics that:

The fundamental concept of modern semiotics — the *text* — [...] has integral meaning and integral function [...]. In this sense it may be regarded as the primary element (basic unit) of culture. (Uspenskij *et al.* 1973: 6)

That ‘culture’ is mostly described in spatial terms (e.g. ‘cultural sphere’, opposition of the ‘inside’ and ‘outside’ of culture, culture as a ‘delimited sphere’, etc., etc.), text comes to share the spatial essence of culture, especially in the term ‘cultural text’ (or ‘culture text’):

In defining culture as a certain secondary language, we introduce the concept of a 'culture text', a text in this secondary language. (Uspenskij *et al.* 1973: 11)

'Cultural texts' can be compared to 'cultural phenomena' (or 'cultural units', even both semiotic and physical 'culture traits', etc.) in anthropology, and reinforce the impression of culture as a space of integrated structural (cultural texts) and functional (cultural languages) features. As it stands in TMS's theses:

The concept 'text' is used in a specifically semiotic sense and, on the one hand, is applied not only to messages in a natural language but also to any carrier of integral ("textual") meaning — to a ceremony, a work of the fine arts, or a piece of music. (Uspenskij *et al.* 1973: 6)

Keeping in mind the above-cited Lotman's opinion (Lotman 1986: 5), it therefore probably would not be wrong to suggest that the notions of text and space are mutually influential, if — in TMS — not even interdependent. This interdependence comes extremely vividly forth nowadays when modern technology itself forces to see and talk about the hypertextual space of global communication. Now, communication, the nature of space and the structure of texts are intertwined, and we talk about intertextual spaces, intersemiotic and intersemiotic communication. On the one hand, it may seem as if textual spaces have, by the development of modern technology (Internet, hyperspace, cyberspace, virtual space, in fact also cosmic space), lost one of their originally inherent feature — that of being bordered and structured thereby. On the other hand, these developments can also be seen in the light that those boundaries have been and are being transformed from the disjunctive into conjunctive ones. We can witness this transformation, or presupposition of such a transformation, already in the concept of the semiosphere (Lotman 1984, for a version in English see Lotman 1990). The semiosphere complicated the intertwined web containing 'text', 'space', 'culture', etc., with the idea of linguistic interaction and internal translatability (Lotman 1984: 11–16). In a way, one may thus compare the semiosphere to 'linguistic spaces' in a wider sense, but also to 'translation spaces' in a broader sense as well.

## **Semiotic space and semiotic subject**

The last nuance seems to have greater importance than only for the paradigm of cultural semiotics. Namely, here shows another possibility to see the proximity of cultural semiotics and (cultural) anthropology: ‘culture bearers’ as actual representatives of a socium can be understood in textual perspective. The conditional or analytic textuality of actual culture bearers provides them with a certain principle — or universal, if you will — features that enable us to apply a unified toolkit at the analysis of individual members of a socium. The actual physical nature of culture bearers as carriers of both physical and semiotic culture traits adds a most pragmatic dimension to the so-to-speak textualised individuals in a cultural space. At the same time, understanding cultures and/or societies in textual terms shares the same countenance: we may view these objects as cultural spaces in which holds a certain linguistic, semiotic, textual, translational congruity (cf. the semiosphere). Thus the individual and the collective-cultural level come to share (several) features, and — from the semiotic perspective — we can apply a unified methodology to the micro- and macrolevel, treating our research objects as *semiotic subjects*. Semiotic subjects can be understood as semiotically bordered (semiotically distinct) and semiotically active physical organisms or conditionally distinct organisms. At the same time those distinct organisms must have a common share in order to be able to form sociocultural (or [inter-] textual) wholes connected through communication. That common share concerns knowledge of both rules and lexicon of semiosis; thus semiotic subjects can, again, be seen as internally cohesive informational spaces that exist in an interconnected (inter-) textual space. That common space presupposes also at least some differences in the stock of knowledge of its individual units — otherwise it would not be possible to talk about communication as *exchange*.

The notion of the semiotic subject is important for setting cultural semiotics in a wider perspective, and also in a larger semiotic context. Namely, it does not seem productive to approach semiotic activity as necessarily taking place between two ontologically separate subjects. When we talk about two semiotic spheres and their (partial) semiotic dissimilarities that create a situation of such semiotic tension that leads to the emergence of meaning, then there is no longer need to

consider those semioactive subjects as separate also on the ontological plane. The emergence of meaning is made possible in a tension field which surfaces (in-) between two semiotic subjects, and involves diverse cases of the so-called unilateral communication, auto-communication, intracultural communication, etc. Thus the concept of the semiotic subject implies two main functions of semiosis. Semiosis is (a) a connector of meaningful units and structures in a way that enables communication between entities containing and/or using (those) meaningful phenomena (e.g. man). Or in other words — semiosis is a creator of consistency by making it possible for different meaningful levels and units to get organised into a coherent functional structure. On account of such an integrating and so-to-speak subject-forming influence there also becomes possible semiosis as a part in (b) interaction between a semiotic subject and other subjects and the environment.

In semiotics, on the basis of approaching the object, sometimes a distinction is made between two fundamental trends — the semiotics of the sign and the semiotics of the code. Whereas it has been noted that “a *semiotics of the code* is an operational device in the service of a *semiotics of sign production*” (Eco 1976: 128), we probably should admit the fundamental interdependence of the two. According to the relevant processes, we can call them semiotics that studies either signification or communication. At the same time, one can easily share the opinion that no communication (between semiotic subjects) can be executed without signs. This means that the semiotics of the code (or: communication) cannot be developed without involving the study of signification. Likewise, no signification phenomenon can appear without at least two partakers (even though both can be generated by one and the same physical communicator), which makes it difficult for the semiotics of the sign to do without the level of the code and communication.

The two major fields of semiotic action — keeping a semiotic subject coherent, and interaction with the ‘outside’ — can be associated with two great concepts in semiotics that have to do with the relevant research traditions. These notions are J. von Uexküll’s ‘*umwelt*’ and J. M. Lotman’s ‘*semiosphere*’ that are keys for the biosemiotic and culturosemiotic perspectives. It should be kept in mind that we can really call them perspectives or accents, since both terms can be applied to the description of both natural and cultural

phenomena; likewise are their historical backgrounds and essences similar. It is highly noteworthy that biosemiotics and cultural semiotics are fundamentally alike also methodologically: both favour the treatment of their objects in metaphorical manners. Interestingly, the two concepts mentioned are comparable historically and developmentally. In 1940, 'umwelt' has been defined as the self-centred world of an organism:

Each Umwelt forms a closed unit in itself, which is governed, in all its parts, by the meaning it has for the subject. According to its meaning for the animal, the stage on which it plays its life-roles (*Lebensbühne*) embraces a wider or narrower space. This space is built up by the animal's sense organs, upon whose powers of resolution will depend the size and number of its localities (*Orte*). (Uexküll 1982: 30)

Around the same time, V. Vernadsky developed his conception of the biosphere as one containing all living matter (his monograph *The Biosphere* was published in 1926), and coined 'noosphere' (the biosphere containing intellect) as the former's continuation (later, 'noosphere' was proliferated by T. de Chardin, cf. Chardin 1960). These two latter terms formed basis for the 'semiosphere' which is defined by J. Lotman as a 'semiotic continuum' that is "filled by semiotic compounds of different types and diverse levels of organisation" (Lotman 1984: 6); or: "the semiosphere is a semiotic space outside which the very existence of semiosis is impossible" (Lotman 1984: 7).

Thus the terminological grounds of umwelt and semiosphere are connected with the biological realm, their germs lay practically in the same scientific epoch, and they have become popular, reachable and widely utilised during the same period (the "discovery" of Uexküll's work in the 1980s and translation into English in 1982, the first publication of the semiosphere in 1984 and translation into English in 1990).

At this point, we can bind these two notions — umwelt and semiosphere — with the semiotic subject in a way as the former allows to describe relations between the semiotic subject and its environment. The latter makes it possible to deal with the analysis of semiosis intrasubjectively: treating culture as a textual macro-object, via the notion of semiosphere, we can describe the consistency or cohesive essence of a semiotic subject on the textual level (cf., e.g.,

Taborsky 1997), just as well as semiotic processes preceding the textual in the so-to-speak intrasubjective communication. It is vital to keep in mind the importance of autocommunication and that a semiotic subject may create its own semiosphere without being in interaction with other *umwelten*. Likewise, (sensory) communication between *umwelten* does not necessarily entail semiospherical aspects.

### **From culture to semiosphere and back**

However, we also ought to consider certain problems connected with TMS's spatial conceptions, especially those related to the semiosphere. These issues come to light when we follow our designed pattern of associating *umwelt* with communication between the semiotic subject and 'external world', and semiosphere with keeping the semiotic subject cohesive. Above, we mentioned that being bordered is one of the most important features of the semiosphere (cf. Lotman 1984: 7–11). This, however, raises several problematic and contradictory issues. Namely, inasmuch as "[...] the notion of the semiosphere is connected with a certain semiotic uniformity and individuality" (Lotman 1984: 7), and "[...] both notions presuppose the semiosphere to be discriminated from the outer-semiotic or alien-semiotic space by a border" (Lotman 1984: 8), there emerges a question: how does this border come to existence, or does it emerge at all, or is it somehow made up, fabricated? Lotman's claims inevitably lead to issues of the origin of that border in terms of its emergence either on the object-level, or its generation on the metalevel. In other words, be the boundary stake at either at object- or metalevel, it can only be outlined by contrasting an 'intrasemiotic' world to an 'outer-semiotic' world, and as far as the outer sphere be not semiotised, possibilities of differentiation are but disregarded. Thus the 'absolute border' simultaneously presumes and dismisses possibilities of describing a semiosphere, and makes the depiction of this border — as the semiosphere *in toto* — possible from a shifted (e.g. divine or extraterrestrial) viewpoint that would enable to engage comparison of the internal and extra-semiospherical units. The original concept of the semiosphere is thus connected with understanding a semiotic reality of a community in totalitarian terms. It seems important to note that a totalitarian understanding of the semiosphere is, for Lotman, not an



occasional affair — after two years of publishing the conception of the semiosphere, he maintains that the term refers to: “[...] the semiotic space of culture in which solely are possible semiotic processes” (Lotman 1986: 6). While, for Lotman, “[...] the ‘closure’ of the semiosphere lies in its inability to get involved with alien-semiotic texts or non-texts” (Lotman 1984: 8), then, in the current context, by the individuality of the semiotic subject, we understand the possibility to describe the semiotic reality as a cohesive, i.e. at least minimally individual whole. In actual case studies, from an internal viewpoint of a semiotic realm, the description of a meaningful world can be executed exactly against a background system which is often formed of ‘non-cultural’ or ‘non-textual’. In order to specify the identity discourse of a semiotic subject, i.e. its (semiotic) boundaries, we must outline those borders somehow, and this can only be done by contrasting the outside of a semiotic reality with its interior. Here we are confronted with a paradoxical situation: in order to be able to talk about the semiotic subject and its individuality as a phenomenon based on contrast between the semiotised and non-semiotised world, and the dynamic border between them, we may conclude — this border is indefinable. More exactly, this boundary — thus likewise features resulting in the extent of the semiotic reality — cannot be circumscribed as persistent. This goes both for the semiotic metalevel, and all the more for the (hypothetically referred) semiotic reality on the object level: talking about the expanse of the meaningful world, we must — in order to describe its boundary — have semiotised elements of the (originally) ‘meaningless world’. Evidently, thereby the latter elements are switched into the frame of the semiotic reality. With the intention of referring to the ‘alien semiotic space’ as a phenomenon outside the semiosphere, we must already have had it semiotised. Consequently, we should not equalise ‘outside of semiotics’ with ‘alien semiotics’, since the former cannot, in principle, be switched into (articulate) discourse. Therefore, when entities of a non-semiotised world are, through semiosis, incorporated into a textual output, they can be referred to as representing ‘non-culture’, ‘alien-semiotic’, ‘non-textual’, rather than a sphere ‘outside semiotic(s)’.

While, in connection with the creation of meaningfulness, there appear so many ambiguities at the definition of the semiotic subject and reality already due to the notion of the semiosphere, we probably should look for a more concrete phenomenon or a category through

which to delimit the semiotic subject. Proceeding from the above-mentioned possibilities to distinguish between reality and the semiotic reality, we may face the verity that, by default, our topic ought to be concerned with the unreadable/incomprehensible/scarcely interpretable on the one hand, and readable/understandable/interpretable on the other. This involves the factor of viewpoint and deprives us from the too categorical nature of J. Lotman's notion of the semiosphere. In fact, the heuristic value of the semiosphere can be cast to doubt, when we recall of those points in the theses of TMS that explain its views on the concept of culture.<sup>3</sup> While Lotman's treatment of the semiosphere puts TMS's conception of culture often merely into another vocabulary, it seems that the original understanding can be more flexible and suitable for actual analysis:

In investigations of a semiotic-typological nature the concept of culture is perceived as fundamental. In doing so we should distinguish between the conception of culture from its own point of view and from the point of view of a scientific metasytem [...]. According to the first position, culture will have the appearance of a certain delimited sphere which is opposed to the phenomena [...] outside it. Thus the concept of culture is inseparably linked with the opposition of its 'non-culture'. (Uspenskij *et al.* 1973: 1)

It is important that TMS's original 'culture' is far less categorical than the 'semiosphere' in ten years after the *Theses*:

The sphere of extracultural nonorganization may sometimes be constructed as a mirror reflection of the sphere of culture or else as a space which, from the position of an observer immersed in the given culture, appears as unorganised, but which from an outer position proves to be a sphere of *different organization*. (Uspenskij *et al.* 1973: 3)

The application of textual approach to cultural phenomena seems to imply that semiotic structures, or semiotic subjects, can but be set in such an environment which is demarcated from such 'different organisations' in the manner as 'culture' is opposed to its outside. The combination of textualist and spatial vocabulary does not entail as categorical oppositions as contained in Lotman's treatment of the

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<sup>3</sup> We can but hypothesise the value of some ideas introduced by Lotman under the notion of the semiosphere, if the latter were replaced with 'the universe of the mind' as a scientific concept, not merely a title of Lotman's book in English (see Lotman 1990).

semiosphere. We can meet evidence to this even in Lotman's own practical analysis of the so-called behavioural texts that are based on the dynamism between 'normal' and 'abnormal', 'normal' and 'artistic' spheres of behavioural modalities. Behavioural texts concern interaction between the cultural space both in the physical and purely semiotic sense; for example:

The Russia before Peter knew binary contrasting of the ritual and extraritual (non-ritual: *vneritual'noe*) space in the world and in the space of human settlement. (Lotman 1977: 77)

It seems that considering TMS as a semiotic school centred around space has several important clues for understanding its development, just as well as significant consequences for scientific history. Space is one of the most basic and substantial categories for reflection and analysis; space is an object of study that can — and has been used by TMS — as a metalinguistic construction. This means that all through its history, TMS has been — already since the very beginnings in the 1960s — one of the few true transdisciplinary schools not only in humanities, but touching also the sphere of the so-called hard science (for instance in its reflections on cerebral/cultural dynamism; Chernigovskaya, Balonov, Deglin 1983; Nikolaechko, Deglin 1984). TMS started off as a discipline studying Russian literature; it ended up by viewing diverse cultural phenomena as cultural texts. It is important what this development brought along in its course, for this is probably one of the first cases of transdisciplinarity in the modern era after the (politically and militarily forced) slow death of the movement towards the *Unified Science* in the beginning of the 20th century. TMS began by studying texts of Russian literature, conditionally ending up by studying cultures as 'texts' or composed of a set of 'texts'. This seemingly minor shift in scientific approach has enormous, almost extraordinary significance in terms of a metalevel shift in general, and this may be one of the few unique cases of such metaphorical approaches that does have heuristic value. At the same time, the progress of TMS from analysing texts of Russian literature to analysing cultural phenomena in textual terms represents, as mentioned, probably one of the first contemporary transdisciplinary developments. TMS's employment of 'cultural text' was, in itself, a remarkably ingenious *device* (let us remind of Russian Formalism). This brought TMS considerably closer to other trends studying culture

even by enabling, at the analysis of both physical and semiotic *culture traits* (let us remind of Ruth Benedict), to apply uniform methods, and to grasp the holism of physical and semiotic components of culture (let us remind of the Estonian folklorist Jakob Hurt and his *old-hoard*<sup>4</sup>). Culture as culture text is formed of such cultural texts the developmental logic of which should principally be hermeneutic; therefore the whole and its components are analysable by uniform methods. Such a state brings TMS closer, backwards, not only to the more dynamic side of Russian Formalism, but also with, for example, New Criticism (let us remind of T. S. Eliot). Likewise, obvious connections can be seen with the more rational part of those who dwelled on the Death of the Author<sup>5</sup>.

The positioning of cultural phenomena into sociocultural contexts allows talking about semiotic spaces and semiosis in diverse aspects of both perception and cognition. Thus, transdisciplinarity, in a sense, lies in objects, and the conglomeration of multiple perspectives and viewpoints draws attention to the futility of trying to separate 'methods' and 'disciplines' that has been an unfortunate topic in connection with semiotics in general. Viewing TMS as a school centred at the study and metalinguistic use of space, thus helps to see its connections with other traditions of thought and research; unfortunately there are but a few examples of suchlike studies yet (cf. e.g. Portis-Winner 1999). Transdisciplinarity is, in fact, not too implicitly implied by TMS itself already in its theses:

[...] together with an approach which permits us to construct a series of relatively autonomous sciences of the semiotic cycle, we shall also admit another approach, according to which all of them examine particular aspects of the *semiotics of culture*, of the study of the functional correlation of different sign systems. (Uspenskij *et al.* 1973: 1)

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<sup>4</sup> In Estonian: *vanavara*.

<sup>5</sup> In principle, TMS turned the *text* into a spatial cultural phenomenon in both ontological and epistemic plane. Therefore we can probably make a short evaluation, maintaining that TMS's *text*'s heuristic potential has, until now, overcome the one of *space*, but this is a topic worthy a longer individual treatment.

## **Construction of semiotic subjects**

Spatial thinking led us to the notion of the semiotic subject, the latter in turn, to problems connected with the partial rigidity of the conception of the semiosphere. It may even be considered dangerous to view the semiosphere — like J. Lotman did — as separated from the ‘alien semiotic’, because this would lead to the isolation of semiotic subjects. All the more, viewing macro-level semiotic subjects, e.g. nations, as operating in isolated semiospheres, points at direct peril realised in the course of history continuously. While in practical analysis it may turn out that semiotic subjects sometimes see their semiotic reality, or their particular semiosphere, as central and even singular (e.g. the exclusion of barbarians, the Nazi propaganda for the Arian race, civilised world vs. the Axis of Evil, etc.), this should not be regarded as a possibility on the metalevel. Self-positioning in an exclusive manner has often been the case when aggressors have justified their military campaigns; it is exactly the ‘civilised enclave’ that has been stated as in need to ‘cultivate’ the outside, to find new living space for itself, or the similar. However, opposing the cultivated oikumene to the rest of the environment or the world is seldom the case at trials of defining such semiotic subjects as nations, for example. In a way, nation-formation is as different from the founding of a state or a related governmental structure as the latter are from the non-governmental. It is significant that contrary to prior cases in history, the foundation of nation-states in Europe centred on self-definition through the description of national sociocultural cores that were not necessarily opposed to others in the disjunctive modality. In a way, although nation-states appealed for a territory, their semiotic essence seems similar to contemporary non-governmental organisations that are major agents in the process of globalisation. Such organisations are not rigid, although their cores tend to be stable; their boundaries are rather lines of interaction, not those separating the ‘own’ from the ‘alien semiotic’. Of course, the core-centred and inclusive semiotic subjects that may often not even have territorial claims, can be of diverse nature and goals (e.g., profit corporations vs. ideological organisations). Sometimes such organisations, however, can follow the ideology of making a distinction between the oikumenical and the ‘alien semiotic’ (e.g., terrorist organisations), but this is exactly the crucially grave situation we drew

attention to in the above discussion. As mentioned, the (semio-) spherical or spatial conceptualisation of semiotic subjects is directly connected with the topic of identity (or: semiotic boundaries) and (self-) positioning in communication, be interaction concerned either with the interpersonal or intercultural level.

Today, intercultural communication first implies the question: what or who are its agents? Are we considering cultures, societies, races, states, nations, individuals or other possible subjects? Having picked one of them, it is further necessary to define what exactly is kept in mind. For example, if choosing 'cultures' to be the agents under inspection, we can probably rule out 'intercultural communication proper' because of the mass communication facilities unifying knowledge and behavioural patterns in the world. Today's world culture and the speed and extent of communication equalizes what used to be understood as distinct cultures, even culture areas, according to cultural anthropology (e.g., Kluckhohn 1961). Communication, literally as a technique of sharing, has homogenized knowledge, behaviour, available and usable communication channels and patterns among peoples inhabiting geographically incongruent and distant areas. Therefore it is difficult to demarcate distinct culture areas in the sense they were outlined only some decades ago. Today we can probably talk just about world culture forming a background system for human population varying in what is actualised in individual communities. Peoples operating with different languages, state organizations, or who are anthropologically (in the biological aspect) dissimilar, do not diverge much in terms of culture. Of course, we must remember that globalisation both homogenises sociocultural groups, and creates heterogeneity at the same time. If contemporary technical facilities are unavailable, so is knowledge channelled in them, and there emerge oases of informational lag or insufficiency.

How, then, to define a community? What forms its basis and influences the distinctive features distinguishing it from 'others'? Inasmuch as people nowadays have to define/relate themselves on the social level by belonging to a certain political structure, most commonly a state as a spatial structure, we are to involve topics surrounding the notion of 'nation' as major factors at the formation of contemporary European structure on the level of societies. It is interesting that while TMS frequently treats semiotic systems as operating within a social formation (in a 'socium', most often), it is

difficult to find any concrete treatment or definition of the respective conglomeration itself. Instead of finding distinctness in understanding the ‘society’, ‘collective’ or the similar, the closest more or less demarcated notion is the ‘nation’. Characteristically to TMS, this term lacks a clear-cut short definition (additionally has ‘nation’ sometimes been typologically compared to ‘quasi-nation’), but we can pay attention to the following:

**Definition 3.** Basis: the city is a quasi-nation.

Let a collective of people X be defined, through the previous inductive step, as a quasi-nation, and let a collective of people Y share the conditions 1–4, possibly also the 5th:

- 1) the territory of X borders or intersects with the territory of Y;
- 2) X and Y use a common language;
- 3) X and Y are characterised by the unity of economic life;
- 4) X and Y have a common culture;
- 5) X is connected with Y by religious unity, mythological-epical unity of tradition, or unity of historical fate — then the union of X and Y is a quasi-nation, its linguistic, cultural and other features are induced by the inductive step shaping it. [...] Every time the fulfilment of at least four features of five is required.

[...] **Definition 5.** [...] A quasi-nation is a nation, if [...] it opposes itself to neighbouring collectives through characteristic features and is conscious of itself as a coherent, closed commune. (Revzin 1977: 40)

This quotation shows, on the one hand, that ‘nation’ can be defined through subjective categories that, in fact, have been constructed and cannot be objectively verified. Even if, at first sight, language, territory or economic life may seem as definite distinctive features, they fade in terms of concrete reference proper, when we think of globalisation, the phenomenon of Diaspora, immigration and the diverse processes and levels of integration and assimilation. Territorial borders, orthographically correct language, the extent of self-sufficient economy are negotiated types of phenomena, not to talk about the relativity of cultural or religious belonging. The inherent essence of the named distinctive features as being constructed is evident and it is not worth to pay further attention to this trivialism here for longer. However, on the other hand, accepting their subjectivity, these categories start to function in the framework of a paradigm centred at ‘semiotic space’, ‘semiosphere’, ‘chronotope’, or ‘semiotic subject’ in our context. Revzin’s stress on the importance of nation (as a semiotic subject) contrasted or opposed to ‘others’ connects TMS’s discourse

on the topic with the Western one in terms of approaching the phenomenon of nationalism. Additionally, the semiotic and spatial distinctive features essential for the definition of (nation as) a semiotic subject, allow us to see several parallels in describing sociocultural units in TMS and several Western schools of thought.

Nationalism is something that has often been mixed up with ethnicity, race, racism, etc. We must not waste time on topics similar to racism or the like, since it has been long proved that there truly exist dissimilar races on Earth, differing in reality probably only by some morphic features. The problem rather lies in how is it possible for bio-anthropologically alike subjects to differentiate their identity as strongly as to use severe violence in order to define and maintain themselves. In Europe nationalism has been a front cover negative issue mostly after WW2. Similarly, definitions of nationalism we can use belong to the same period. This is strange, because the idea of nation-specific entities dates back to the formation of the current European states. In short: at times of Enlightenment there was to be found an alternative to understanding social relations as based on (unequal) classes in favour of an 'equal' foundation for human relations. If in the case of e.g. an ethnos we can define the unit at least in linguistic and anthropological terms, defining a nation is much more problematic. There are and have been used very many criteria to define nation (language, culture, territory, time, history, social structure, bio-anthropological peculiarities) of which the majority are negotiated, arbitrary and most conditional constructions. While it is quite common to meet condemning attitude to nationalism in the 'adequately polite' or 'politically correct' behaviour, e.g. in political statements, public discourse, etc., this cannot be the case in scholarship. Besides not being positive or negative, another issue is keeping in mind the difference between nationalism on the one hand, and chauvinism, patriotism and so forth on the other. Nationalism hints at the sentiment holding a community together and a rough rule of the need for congruence of an ethnic, linguistic, territorial and other dimensions mentioned above. Chauvinism, on the other hand, already refers to taking *role* in intercultural communication according to the principle of (high) self-evaluation. Revzin's understanding of the nation (except his fifth point of definition) suits the definition of the semiotic subject in the line of the so-to-speak positive nationalism, chauvinist nationalism can rather be described through the strict



conception of the semiosphere. In actual research, the notion of positive nationalism allows us to apply TMS's conceptions of culture and text to macrolevel semiotic subjects, and thereby also textual and spatial dimensions and features come together.

### **TMS: through space towards transdisciplinarity**

The appearance of TMS should not be regarded as out of the blue. Hypothetically, developmental stages of metacultures can be outlined as follows: discipline<sub>1</sub> → multidisciplinary studies → interdisciplinary studies → transdisciplinary studies → discipline<sub>2</sub>/new base discipline. This range can probably be altered in several ways (e.g. adding polydisciplinarity), but it seems that the development of TMS can be characterised according to this logic. Apparently, TMS's roots lay in the study of Russian literature, and literary history was and is a field of study considered as a discipline even nowadays. However, a semiotic attitude cannot but remain unsatisfied with the study of mere texts: this follows even from the logic that took the Chomskyan 'linguistic competence' to 'communicative', 'cultural', and 'semiotic competence'. In order to understand texts, one has to pay attention to the cultural contexts that influence comprehension of ways of solving communicative situations. Orientation in cultural realms demands also abilities to navigate in the semiotic reality in terms of comprehending and distinguishing between concrete and abstract referents. By way of enlarging contexts (in addition to the literary, also cultural, social, economical, etc.), TMS managed to expand the study of texts to all of the named spheres of cognitive competences.

The linguistic perspective and analysis of strictly literary texts was replaced by the study of cultural phenomena (including literary texts). The latter were (multi-) contextually positioned, and that enabled TMS to widely use spatial terms in concrete analysis of literary texts. Space in text and textual spaces as objects and research trends indicate that first space was, in a way, quite strictly the space of a secondary modelling system (e.g. that of literature). Cunningly, in such a way space gradually became into the actual object of study (sometimes called also as [sociocultural] chronotopes), while relatedly, spatial terms obtained higher and higher importance also for the meta-language (from 'textual space' to e.g. 'city space', 'semiosphere' in

the end). Besides texts as output of secondary modelling systems, it was realised that there exist also physical and historical contexts of text-generation, and these implied the recognition of diverse spatial levels:

At the same time, while the spatial language interests us not from the viewpoint of its genesis, but as the modelling code of culture, we must study its complexity and understand that in reality the position is held not by a certain single language, but a hierarchy of spatial languages. (Lotman 1986: 6)

This is probably a background for the relatively high popularity of TMS and the applicability of its metalinguistic constructions to quite diverse phenomena — in fact, cultural semiotics along with its object of study, the semiotic space, can be considered as one of the first instances of transdisciplinarity as mentioned above. TMS, having its start-off in Russian literature studies as a discipline, passed through the above mentioned stages of development, became into an individual discipline, and — having reached the level of transdisciplinarity — can now be considered as a methodological basis on which to build the study of sociocultural phenomena in general. The use of TMS's toolkit for the description of culture along with its spatio-semiotic terminology could be a unified perspective to analyse sociocultural phenomena and semiotic subjects in contemporary situation of globalisation. When we keep ourselves conscious to employ the conception of the semiosphere only in the manner as neglecting its certain above-described totalitarian insinuations and remind of its roots in TMS's original understanding of culture (which seems much more functional than the concept of semiosphere), and enhance such a view on semiotic subjects with implements coming from the model of the *umwelt*, we may find ourselves at a transdisciplinary threshold proper.<sup>6</sup>

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### **О пространственности в семиотике культуры Тартуско-Московской школы: семиотический субъект**

В статье рассматривается развитие ТМШ от анализа текста до изучения пространственных семиотических единиц (из них наиболее известная — семиосфера). В то же время предпринимается попытка показать, что в семиотике ТМШ такие понятия, как например, «культура» и «пространство», не нуждаются в прибавлении термина «семиосферы». В статье изучаются возможности связать базовые понятия Юкскулля и Лотмана (как основы эстонской семиотики) с описанием культуры и пространства в ТМШ посредством «семиотического субъекта». Такой подход позволяет увидеть трансдисциплинарность уже в начальных разработках ТМШ, где симбиотически использовались «культура» и «пространство».

**Ruumilisusest Tartu–Moskva kultuurisemiootikas:  
Semiootiline subjekt**

Artiklis vaadeldakse Tartu–Moskva semiootikakoolkonna arengut teksti-analüüsisist ruumiliste semiootiliste üksuste uurimiseni (viimastest tuntuim on semiosfäär). Samas püütakse näidata, et Tartu–Moskva semiootikas on olnud nt 'kultuuri' ja 'ruumi' näol tegemist selliste mõistetega, millele nt 'semiosfäär' juurde ei panusta. Uuritakse võimalusi ühendada Uexkülli ja Lotmani baasmõisted (Eesti semiootika alustaladena) Tartu–Moskva koolkonna kultuuri- ja ruumikäsiteluga 'semiootilise subjekti' kaudu. Seesugune lähenemine võimaldab näha alles viimasel kümnendil tähtsustunud transdistsiplinaarsust juba Tartu–Moskva algkontseptsioonides, mis avaldusid 'kultuuri' ja 'ruumi' sümbiootilises kasutamises.

## Space-Time: A mythological geometry

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**Abstract.** In the article the fundamental graphic models that are used by the cultural consciousness to bring about the abstract spheres of thought are analyzed. The problem of inter-semiotic, i.e. emblematic, interpretation of the categories of space and time is also considered. The models of the cross and pyramid are analyzed from the point of view of their ideological (transcending) function and of the mechanism of emblemating the abstract notions of time and space. This approach helps understanding the general laws of cultural mentality and the process of emblemating any meaning for the structuring and fixation purposes.

This research situates itself within the *Kulturwissenschaft* tradition of philosophical-iconographic studies that go back to A. Warburg (Ginsburg 1989: 17–59). If we use E. Panofsky's distinction between iconology and iconography (Panofsky 1955: 29–30), it is precisely iconographic or formally analytical. Panofsky traces this "formal analytic method" back to H. Wölfflin, defining it as an iconographic analysis of pictorial motifs and their combinations. The idea of a pictorial motif, as will be elucidated further, fits within the diagram framework, whose development takes stage as motif combinations and recombinations within a very broad take on visual culture. The groundwork laid by W. J. T. Mitchell (1986, 1994), N. Mirzoeff (1999) as well as R. Krauss (1985) is the source of this very visual culture.

The idea of a 'motif', as re-used by me, is rooted in B. Gasparov (1984, 1988–1989, 1993), who in turn applies it to literary text, while borrowing it alongside its formal aspects from music theory (Gasparov 1969). B. Gasparov currently holds a professorship at Columbia

University, but his early academic career began at Tartu. Early ideas towards motif analysis were presented by Gasparov in a specialized course delivered in University of Tartu in the late 1970s. Motif analysis is the key methodological tool which I will be using (with some adjustments made in terms of the object of study) in the current work. The concept of motif extrapolated onto visual matter cannot but transform the method itself. In light of the Tartu–Moscow School, this method was taking shape under the influence of ‘History of Ideas’ school, primarily as outlined by Frances Yates (Yates 1966). Among the sources worth noting are the works on iconography by F. Buslaev (1886, 1919), which in many ways served as the groundwork towards a semiotic approach to analyzing spatial representation forms of P. Florensky (1922, 1992, 1993a) that were eventually able to see the light of day after a long period of Soviet repression, particularly his essay, “Reverse Perspective” (1967).

Regarding my understanding of myth and the pictorial motifs that may inhabit its zone of influence, I owe it specifically to V. Toporov’s fundamental research (Toporov 1967, 1995, 1997, 2003). Toporov was one of the founders of the Tartu–Moscow semiotic school. I see as equally important the broader tradition concerning myth: philosophical (Losev 1991; Cassirer 1955; Barthes 1984), anthropological (Lévi-Strauss 1963, 1970) and poetic (Eliade 1959, 1961, 1963; Graves 1948).

## 1. Space-Time: problems of representation

Something needs to be said to precede the current study: both Space and Time are understood by the author as mythological concepts, that is, as models of consciousness, as opposed to categories. I define Space and Time philosophically, without trying to figure out their ‘actual meaning’. Without a doubt, this approach is emblematic: I am first and foremost concerned with the combined collective imagery, objects, word usage, along with the aforementioned programmatic, self-defining terms like “space” and “time” (regardless of whether these combination are meant for a textbook on physics or a poetic text). In any case, we are dealing with a sort of representation which does not allow for its verity or quality to be tested under the method in question. In saying that the word has duration in time, or in discriminating between spatial and temporal art forms, we typically

reason in terms of *plausible-enough-error* which, effectively, is an operational field of research for this paper. My purpose is to show the extent which *plausible-enough-errors* of consciousness can be thought of as a harmonious system, as well as to pinpoint ways in which they structure macro-mythological formations.

My approach has chiefly to do with theories of creation myth and neo-mythology of the late 19th century to the early 20th century. Moreover, all of the 20th century is marked by the study, further discovery and cataloging of myths and their working, throughout the areas of human consciousness. Meanwhile, virtually all of the mythological studies are focused on myth as specific *verbal* way of thinking. “[Myth’s] substance [...] [lies] in the story which it tells. Myth is a language, functioning on an especially high level, where meaning succeeds practically at “taking off” from the “linguistic ground on which it keeps on rolling” (Lévi-Strauss 1974: 210). I see this as paradoxical, to say the least, particularly in Barthes’ version: “Myth is a word, an utterance” (Barthes 1989). The very choice of examples in Barthes goes to show the impossibility of reducing myth to its verbal coating only. In part, such an interpretation is suggested by the word’s actual etymology (from Greek *mythos* — story, narrative). However, it is impossible not to notice just how futile the attempts of such reductionism are when it comes to a variety of cultural trends which operate and are typologically described in terms of myth, not the least, in conceiving and propagating the so-called “world model”.

A notable exception would be Losev’s theory of symbol, particularly his thoughts on the mythologizing of a person: “Myth is [...] an affirmation of the person [...] functioning as *disclosure* and *expressiveness*. It is a person’s image, picture, [...] face. [...] Myth is portraiture, a pictorial radiance, an icon of the person” (Losev 1991: 94, italics added)<sup>2</sup>. In actual fact, Losev is depicting a phenomenon which nowadays is referred to as ‘image’ of the person, something of a composite public identity. Yet, in order to acknowledge this element of myth’s

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<sup>1</sup> The immensity of works concerning relationship between Space and Time can hardly be listed here in all its variety, even as a brief overview. It is one of the perpetual problems of human consciousness and, in all probability, one without solution. I am not holding any illusions of being able to provide a solution. My purpose is to suggest some form of strategy in understanding this relationship using an emblem-based model for generation of meaning.

<sup>2</sup> Translations are mine unless otherwise specified — J. G.



pictorial quality (*kartinmost'*) it is necessary to further analyze its patterns: something that has not been undertaken to date. It has been of utmost importance to my research to highlight the *graphic* rules of mythological representation, which are necessarily in close contact with the word and convention resulting in emblem-type formations.

In my analysis, I am consciously focusing on the exterior of mythological sign. This is largely due to the fact that operational and analytical potential of (artistic) expression applied to theory of knowledge remains, so far, of little repercussion. As a matter of fact, the efficacy of this potential is recognized only in the realm of fine arts, preferably graphic art, although, the role of the arts for theory of knowledge is yet to gain acceptance. Science and easy ways do not always go hand in hand, and yet, however, in an attempt to define Time and Space, presented with an unhappy choice between "love of the word" and what is plainly observable evidence I have chosen plain evidence of the observable clear-cut certainties as my reference point, if it is to have any stability or permanence. After all, the means by which time and space are represented in culture, are plainly evident and obvious. Thus, between *knowing* what Time is and *seeing* what Time is, I will be referring to the latter. I would like to begin my analysis of the clear-cut observable evidence by using a well-known graphic model for representing time.

## 2. An instance of graphic representation of Time

I came across an amusing pattern in my research on advertisement analysis. The time of the day, as shown by mechanical clocks in advertising, is 10:10 in 90% of cases (fig. 1–2). Deviations are possible (this is not the law of gravity, although, as we will observe further, the pattern in question bears a certain relation to the law of gravity), at times this may be 11:10 or 11:05, yet occurs somewhat more seldom which is also quite logical. Besides, this rule is not observed when time shown is motivated by a plotline, for instance, when New Year's Eve motif is used. Yet, in all other instances, this is quite a regular feature. We have every reason to think that advertisers suggest this V-shaped position of the clock hands (in relation to each other, as well as to the clock dial) because they perceive it as most visually appealing: something so regular and peculiar is enough to be worth an explanation.

**GOLDMAN**  
LTD.

*Precision*  
movements



by  
**RAYMOND WEIL**  
GENEVE



WITH A MASTER'S TOUCH AND THE TEST OF TIME

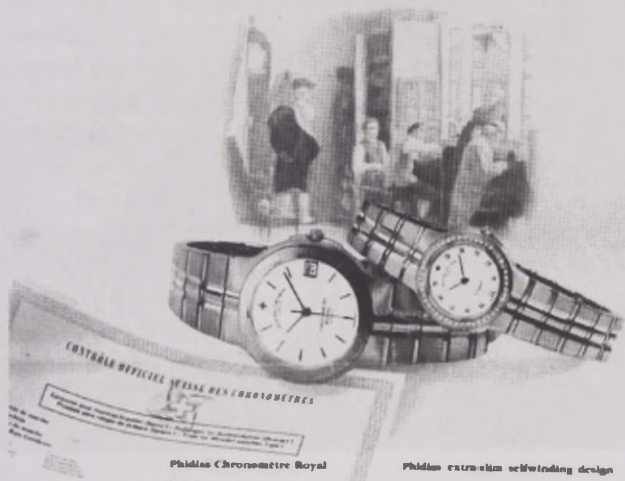


Figure 1. Clock on this ad shows 10:10. The advertisement highlights the way how the movement of the clock hand is comparable to the rotation of the swastika.

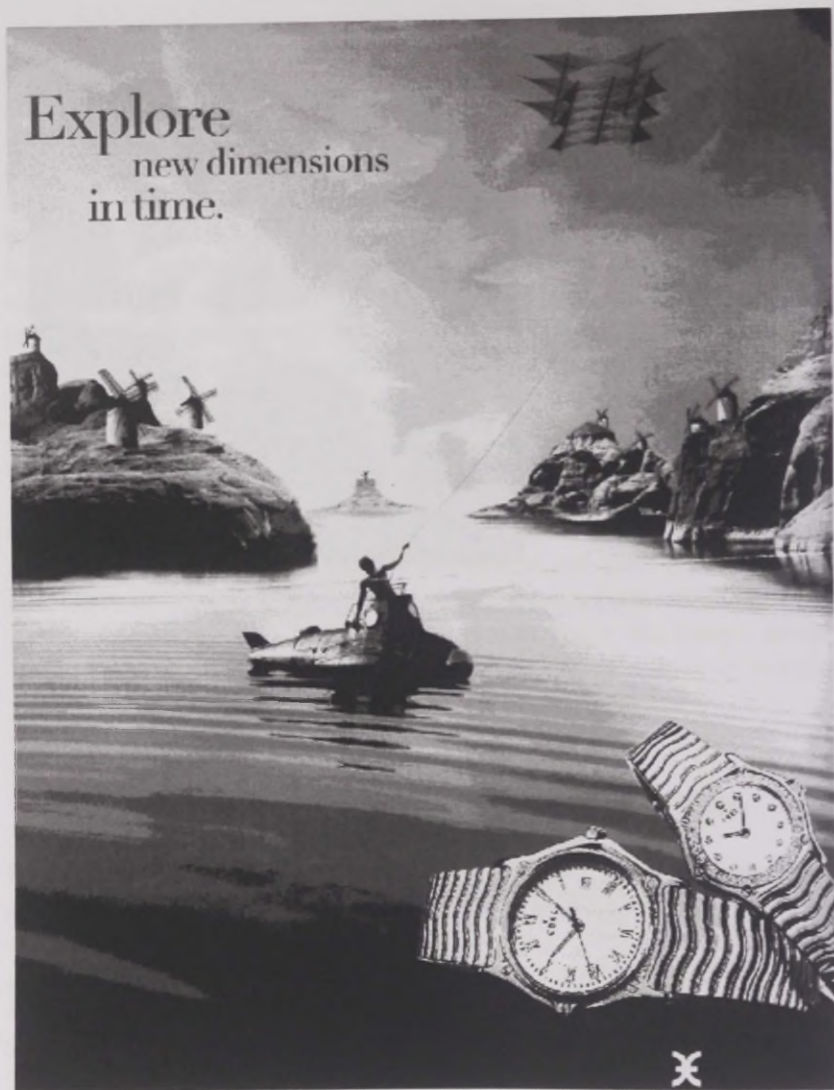


Figure 2. An advertisement for watches. The background contains the “rotating cross/windmill” motif. Human character in the center of the composition represents the same graphic element of 10:10. With the windmill at the perspective vanishing point, the ocean cone becomes the sky cone in the landscape.

Here, the strategy of presenting the case may have some flexibility: the logic of analogies can be arbitrary enough, without being a claim to a final answer. The only criterion by which I was guided, was to account for as many motive/motif connotations (of this graphic figure and of the model of Time at large) as possible. Unlike the word (and this is of utmost importance), the graphic image will invariably retain some sort of motive/motif when serving as a link between form and expression. This motivation, however, will never consist of one thing alone (in the absence of a fixed word reserved for it, unlike the classical emblem), is the reason why *a priori* interpretation in this case will not be relegated to one single meaning. This follows directly from the nature of the link between the signifier and the signified when it comes to graphics. Unlike conventional language, graphic elements of an iconic sign have no finite number of possible contextual meanings assigned to them. Therefore, all the attempts to “read” the graphic text unequivocally, as if it were verbal, are doomed to fail, methodologically speaking.

Thus, an explanation can be sufficiently simple: a V-shaped figure resembles the hand gesture combination which stands for victory. Why is the V-shape so *optimal* for *both* denoting victory and improving the image of advertising clocks? Let us not forget that Churchill’s gesture was enthusiastically *identified* and gradually adopted the world over, even where the word ‘victory’ does not begin with the letter V.

It seems that we need to begin with motivation. Advertising is extremely convenient for that matter, since in it, as in a detective novel, motive is the pivotal engine (as in: look for somebody directly benefiting from the affair), yet, unlike the detective novel, the motive is known beforehand. There is no need to look for the signified: it is enough to know *what exactly* is being sold by the means of the clock. Leaving aside luxury and prestige (or conversely: accessibility and practicality), neither of which are exclusive to clocks or watches, clocks sell a representation of *current time* which is precisely what is to be depicted. Therefore, according to this graphic version, time can be represented as V-shape.

### 3. 'Spatialized' Time

It is evident that in the collective human consciousness (both that of the masses and the intellectual/elite) Time, likewise, is expressed only by the means of a range of spatial metaphors. N. Arutiunova writes on spatial metaphors of Time:

Linguistic models of Time can be divided into those where Human Being is the key character and those oriented towards Time proper. In the former case, the Line of Time represents the flow of life and the line of destiny; while the latter it deals with the movement of cosmic substances, namely: air and water. (Arutiunova 1998: 689)

The metaphor of Time may be fashioned according to three basic most recurrent patterns: (1) in the shape of some continuous extension (a ribbon, a thread, a river, a road), (2) some tiny particles (grains of sand, raindrops, insects), and (3) allegorically, in the shape of a human being (or, if there are several humans, these mirrors the aforementioned "The Ages of Man" motif) of a certain age furnished with certain attributes (a beard, a scythe, an hourglass, a skull, a pair of wings etc.) which can themselves independently generate the same meaning. Such iconographic examples abound in the most exhaustive collection of emblems from the 16th–17th centuries, which was effectively a period when this type of iconography flourished in Europe (Henkel, Schöne 1967).

Moreover, continuity (just as fragmentation) is easily reversible here: water falls apart as drops, sand comes together as dunes, thread is ripped or cut in two and snowflakes stick together, forming the 'Ball of Eternity'. Both fragmentation and continuity may be thought of as fundamental properties of the archetypal notion of Time.

These are metaphors that are easily recognizable, albeit at times familiar to the point of being worn out. Yet, there is a category of metaphors which we use on a daily basis while not considering them metaphors, but rather precision measurement instruments. Such instruments-metaphors are the clocks/watches of all types and descriptions. It is from this vantage point that L. F. Chertov analyzes the clocks in his essay "Clocks as spatial model of time" (Chertov 1998: 101–114), though without dwelling on the issues of basic graphic correlations.

As a matter of fact, visible Time is always given to us in space: "Temporal relationships express themselves and unfold exclusively

through spatial ones (Cassirer 1955: 103–104; see also Smart 1955: 239–241; Smart 1964; Borel 1960). I would like to further complement this point (which has attained sufficient triviality) with a number of mythological figures, whose perpetuity attests to their structuring potential as well as a certain emblematic intelligence of these main philosophic categories.

The motion of the Sun and the Moon, shadows moving between 2- and 3-dimensional spaces are a natural transformation of Space by Time. Each vertically-oriented object turns out to be a clock hand, whilst each horizontal one, a clock dial. Or, to be more precise, the clock hand is a shadow projection onto the surface of any object which forms an angle with that surface. Sundials re-use the same principle. Mechanical clocks materialize the movement of shadow, thus presenting a metonymic model of Space (Earth's surface) arbitrarily segmented.

Both water-clocks and hourglasses measure time using more obvious spatial volumes. It is not for me to judge which of following are primary or secondary with regard to the above: idiomatic metaphor (“passing of time”), philosophical (“no one can enter the same river twice”) or being a water instrument for measuring time (klepsydra). What matters to me is that here too, the rule of sharing the same “vessel” by some non-discrete substance, which may be easily divided into pieces or, to be more precise, one substance in two different philosophical-aggregate forms. Neither water, nor sand is (immediately) quantifiable: we can count grains of sand or drops of water, which is a totally different concept.

Perhaps, the only way of measuring or expressing time is the clock bell (or ship bell). Yet even here, the measurement-expression is made possible via our conception of cyclical time; or, to put it better, the repetitiveness of the cycle, that is: the rhythm which certainly is a category which has a spatial marking to it, given that a stand-alone symbol would be meaningless to the process: only the segment having this dual awareness of the two points simultaneously, will be meaningful.

Repetition makes one look back, that is to say, halts Time while presenting an idea of Space: in this case in terms of an opportunity to visualize Time as a ‘gap’ (the very notion applicable to both Space and Time). Here, it seems, Henri Bergson's observation is very timely:

If the sounds are separated, they must leave empty intervals between them. If we count them, the intervals must remain though the sounds disappear: how

could these intervals remain, if they were pure duration and not space? It is in space, therefore, that the operation takes place. (Bergson 1910: 87)

When it comes to transformation of Space by Time in the mind, this transformation is not observable outside that which we think of as Time. The way we feel and perceive the Space depends on how prolonged this feeling is. A point having no dimension has no spatial traits either. Space as visualization or, more importantly, an imitation of this visual image is structured as a combination of light and shadow blots. It seems only two-dimension plane can be visualized outside Time (although it takes time to realize that it is indeed a two-dimension plane). In order for two-dimensionality to attain volume it needs to be cross-hatched. Thus, each portrayal of Space has a stamp of Time on it as well. Light and shadow create a unique combination of Space and Time existing inside each other. A division of these two substances or light/shadow absolutized, eliminates the notions of Space and Time in human mind. That is: neither light nor shadow, on their own, possesses any of these traits, yet they already signify timelessness and 'spacelessness', as well as the unknowable — a consequence of unfeasibility of any translation.

This is precisely why both Early Medieval Western European religious painting, along with Byzantine icons, would imitate Light (using the golden background) rather than Space: this signifies 'spacelessness' and timelessness that cannot be comprehended, yet can be an object of faith. When a source of light is introduced into the image, it is thus immersed into a fixed space-time continuum. The next step towards regularization of the relationship between the depicted chronotope and the chronotope of the recipient, is the use of the rules of direct perspective, which specify a direct link between the viewer's and the painting's mutual arrangement, within which the real and the imaginary/imitated space-time continuums intersect. Certain analyses of spatial-temporal relationships in art this interdependence is formulated in a somewhat more complex way via intersection of the real, conceptual, and perceptual space-time (Zobov, Mostepanenko 1974: 14).

Another method of conceiving Space through Time (or vice versa, since this is a process of mutual translation and no issue of what is primary/secondary arises) is the gesture or movement — such process can also be called 'rhythm'. The length of movement measured by the intervals transforms the categories into a feeling of their unity. The

basic connection between these categories is the pulsating blood in the arteries and veins of the human body (*vid.* Elkin 1969: 78–79; and also Favorski 1988: 234: “How to measure Time? It appears to be different from person to person and depends primarily from one’s pulse”). This basic feature is further enhanced by the motor-tactile and acoustic information. Furthermore, all aspects of human economy can be related to mutually translatable Space and Time.

Moreover, it is certain that the human being can be also described as a device for gathering/dismantling one’s perception of temporal (acoustic) and spatial (figurative) arrays. It is not by chance that Romanticism, in an attempt to reject the rigid emblematic framework, embarks upon exploiting the human somatic and physiological defects along with absolutizing music as the most Space-less art form, while also attempting to purify it to the core. Hence, we meet the Blind Musician character (Korolenko’s late romanticism), or the Deaf Musician which is even more telling for that matter: take for instance the life of Beethoven (e.g., in Odoevsky’s *Russian Nights*).

The notion that Time can only be expressed in terms of Space, is most likely to be a pan-cultural oxymoron, as both Space and Time exist in our mind as mutually exclusive or, to put it linguistically, in a state of complementary distribution. One by no means can be the other, but also cannot exist outside the other, the two being “indivisible yet distinct”. This analogy (or model?) materializes in the shape of a vessel with a very narrow neck through which the substance runs, while the substance’s quantitative properties are modified: the Space is fragmented to the point of ceasing to be itself, it becomes Time. The above transformation is certainly not to be taken scientifically: it is but an interpretation of one by the means of the other, an interpretation with a clearly defined strategy: a reduction almost brought to its own endpoint.

#### **4. Hourglass model**

Graphically or geometrically, the idea of hourglass may be presented as two pyramids or cones meeting each other at one point situated at their respective peaks. The pyramid presents a model of reduction of Space into one point. It is on this property that the mythology of the pyramid builds all the variety of its manifestations.



In accordance with the same strategy, we can draw graphs of the changing correlation along the two axes — vertical and horizontal — which have only one point in common with each other. Is it an objective or subjective feature of the point to be small enough so as to make its pertinence indistinguishable for the eye? One can be the other in one point exclusively. This point, as a rule, is also a ‘zero point’, which effectively places it outside the two sets. The latter moment is very substantial, since the process of Time representation from this vantage point turns out to be the process of establishing a contact with some sort of transcendental essence revealed apophatically via the same model: zero point is a negation of the main factors of the visible material cosmos. Therefore, the moment of passage to “hereafter” can be presented as transit via a tiny hole in accordance with the formula: “It is easier for a camel to go through the eye of a needle...” (The death experience which the analysts persist in placing alongside the birth one, produces a similar characteristic image/painting of passage through converging pipework, funnels, passageways, labyrinths, orifices — Grof, Halifax 1996.)

The point in question can be identified as mythological zero point of birth-death of the world. It represents first and foremost a spatial orientation support base (cf. Podosinov 1999: 459–472). This point can be presented as a rolled up cosmos within the Cosmic Egg (cf. Toporov 1967: 81–99). Yet, it may also present itself as pinnacle as well as the center of the Universe. The above depiction can be compared to the scientific hypotheses concerning the origin of the Universe from singularity:

Return towards a mythological worldview of the unique “pre-existent” time can be seen in contemporary cosmogonic theories which presuppose a formation of the Universe due to an ‘explosion’ of a hyper-dense substance concentrated in an ‘atom’. (Ivanov 1974: 41)

Once again, it may be noted that neither the logic nor the imagery of myth contradict the logic and terminological metaphors of the sciences of the ‘natural’ cycle — this contradiction itself is rather a construct, a variety of mythological thinking the opposites. To recall A. Losev: “Science is ever accompanied by mythology as well as is genuinely nourished by its initial intuitions” (Losev 1991: 29).

Moreover, one may clearly observe a constructive tautology in the way space-time correlation is presented in culture. The classical

allegory of time Chronos-Saturn (the characters of Saturn, Chronos and Cronus all had a tendency to be mixed already in antiquity — cf. Klibansky, Saxl, Panofsky 1964: 133), while the imagery unfolding as a plot, displays the aforementioned properties of the Space becoming Time With Old Chronos devouring his children (the moments), that is, processing himself via his own crushing neck — the operational principle is the same as with the hourglass. The ancient emblem thus turns out to be a detailed enough account of a time-measuring device. Or conversely: the device is organized according to the principle of this emblem. The issue of which of these events is a first-order or a secondary one is quite convoluted, which is why, in all probability, we need to speak in terms of some archetypal constructs of consciousness.

There is an additional twist to this iconographic plotline, brilliantly illustrated by Panofsky (cf. Vater Chronos analyzed by Panofsky 1980): Saturn-Chronos devouring a child whilst another (or the same) child performs castration on Saturn-Chronos. The process at play resembles the overall scheme of the information process in its rather classical version (Wiener 1983). Severing genetic memory, the idea of entropy is expressed with an ancient simplicity and sincerity. By the way, the hourglass is an ever-present attribute within the graphic compositions of Vanitas-type depicting in a metonymically balanced fashion, both life (with its futility and vanity) and death (as inevitable consequence of the former).

## **5. Atomization of space and genesis of speech**

This very well-established way of representing Time — all-consuming Time — allows me to make certain suppositions with regard to organization of the orifice between the two cones, the zero point of the chronotope. In the case of Chronos, it is plausible that the orifice is a sort of grinding device, a chewing mouth (Derzhavin's *crater of Eternity*), although this grinding can be facilitated simply by the small size of the orifice. In a broader sense, this is a valve or a tap: a device that both lets the substances through and prevents this or that substance from penetration. A frontier understood in its logical philosophical sense as time a place where the two substances meet and separate. The mouth here is one of the acceptable and widespread metaphors closely linked to mythology at the origins of speech.

I will supply only one example of a very tightly-built motif array from Andrei Bely's mytho-poetic theory of speech genesis, inspired by Steiner's theosophic system as well as (in my view) by the practice of spoken German (cf. Grigorjeva 1998: 155–161)<sup>3</sup>.

Genesis of verbal *meaning*, according to *Glossolalias*, is directly linked to kinesthetic *plasticity* of the organs of speech or graphic figures, hieroglyphs of sorts emerging as a result of propagating of the acoustic wave throughout the 'liquid' changing space of the laryngeal and oral cavities.

In the *u* the depth of **laryngeal well** is well-defined; *u* is genuine just as *die Uhr*, in the *u* we feel the **gullet**, it seems like vanishing in [the remoteness of] the past. (Bely 1922: 73; here and in the other citations from Bely the italics are mine, bold script is A. Bely's — J. G.)

Another telling feature is that the larynx orifice is merged by Bely with the Time compound, *die Uhr* (German for 'clock') and the flavor of antiquity, *Ur-*, as if enacting the struggle of antiquity (= Eternity) with Time:

From the struggle between *a* and *e* Time is conceived – the tragedy of the world: *Arche* begets *Chronos*; while Time is enveloped in struggle of the noble *r* in the timelessness of *Uhr*; a hero defeating *Hurrah-Uranus* which is Chronos; he is *Herr*, a battle cry and a crunch of the *ha-er-ha*, a wheeze of the struggling *Hurrah* being **strangled**. (Bely 1922: 45)

Naturally, Andrei Bely is far from being a positivistic scientist or even a philosopher (if we take the fullness of the meaning), yet this (neo)myth-creation to him is a professional activity. His intricate imagery, combined in various ways, is extremely detailed in terms of logical features, such as merging of the 'cry' and the 'crunch' into

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<sup>3</sup> Steiner's Anthroposophy having hugely influenced a number of pedagogical/formative aspects in European culture, to a large extent was oriented towards an esoteric, geometric tradition of mnemonics. The subject is yet to be touched upon by academic research. Surprisingly, even Lachmann, even though she does mention the updating of the Saturn myth by symbolists under Steiner's influence. Even the remarkable book by Lena Silard, *Hermetics and Hermeneutics* (Silard 2002) Bely's *Glossolalia* is not mentioned. Bely never made a secret of his veneration of Steiner. Even a passing acquaintance with Steiner's *Cosmogony* (Steiner 1997: 183-255) is enough to see the parallels with *Poimander*'s, as well as the social circle of Raymond Lull and the Camillo's Theater.

'wheeze'. As a result, the choice of word forms to reinforce his original forms is, by no means, a chance one: to depict a reduction of u-larynx it was more than adequate to pick the Russian word *udushenie* (strangling).<sup>4</sup>

Furthermore, Andrei Bely's constructs perform this 'organic localization' of meaning of the word extended in time. Graphic semantic mechanism of the phonetic compounds turns out to be directly comparable with mythological and ideological motif compounds:

In the *hr*-sound we [are given] an intersection of the lines of expiring fever with another powerful line: a rising *r* in the middle of a circle or cavity: cross in the circle, *hr*, is *hrest* which is *crux*, *croix*. **Prior to world creation in the cosmic milieu (in the mouth) a cross is elevated.** (Bely 1922: 45)

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<sup>4</sup> The issue of somatic tenets of linguistic signs is an area which remains to be widely studied. It is typically seen as a prerogative of the poetic/artistic language. F. Zelinskij observes with regard to the convict's speech (in Dostoyevsky's *The House of the Dead*): Dostoyevsky's use of the slang word *tilisnu* for "strike", "slash" ("[and so I] slit her throat like she was a calf"). "Is there a semblance between the way *tilisnut'* is articulated in movement and the movement of the knife blade gliding along the human skin? Not really, albeit this articulate movement is best to none in depicting the position of the facial muscles instinctively caused by a peculiar sense of nerve pain experienced by us when we picture [in our minds] the knife gliding along the skin (as opposed to piercing the skin): the lips are suddenly brokenly stretched out, the throat is stifled, teeth are clenched, and there's no option left but to utter the [Russian] vowel sound *i* and as well as the labial consonants *t*, *l*, *s* whose choice (and not the loud *d*, *r*, *z*) was somewhat dictated by onomatopoeic factors" (Zelinskij 1911, 2: 185–186). It is crucial that the above research highlights the idea of "pictorial" linguistic coinage being expressed in somatic terms: uttering the word compels one to *mimically* experience the aforementioned emotion. Similarly to Jakobson's 'poetic function of language' the cited phenomenon can be described in terms of 'mimic/mimetic' function of language whereby the word is as if replicated in a somatic-kinesthetic way. Also, it appears that this function comes with any natural language as opposed to just the literary one. Among the European languages that I am familiar with, it appears to me, only German has a highly developed kinesthetic plasticity of expression, such as the alteration of the quality of vowels by umlaut is at times almost iconographic (for instance: *lachen* – *lächeln*) or as is the case with the subjunctive when incompleteness, uncertainty of action is expressed by the means of a clearly observed vowel contraction.

## 6. The Cross as an algorithm of grinding

I see this figure of “cross in the mouth” as the most worthy of analysis, since it specifies the process of mythological grinding of Space. In other words, this process is depicted in terms of a regular algorithm. The Cross imposes the regular partitioning of the Space in two, then again in two: Leonardo Da Vinci in his world famous sketch of man-wheel is fully aware of the potential of such algorithm. Death on the Cross implies the process of the Flesh becoming Word, a process referring to the process of conception by the Spirit where the Spirit=Word become Flesh. The mechanism and combination are fully compatible with overall structure of emblem combining word and image. (This nomination fits in well with the terms defining parts of an emblem in its classical version: “Their bodies, which some call figures, and their Mottoes, which are termed souls and words” – Estienne 1646, 2). Yet this emblem is peculiar: a translation taking place within it, is one between the “real” and the “transcendental”. Therefore, in observing the mechanism of translation-transit/passage, we touch upon several fundamental principles of the human culture.

These signification aspects of the process of passage from life to death were dealt with in the previous chapter. The strategies of this emblem-making are archaic almost to the point of coinciding with the origin of consciousness proper, and are ever-relevant. Christianity re-uses these strategies inheriting to the pagan sacrificial cults, yet introduces its own peculiarities. It seems to me, one of the signs of such peculiarity is a more regularized process of transcendence. It is linked to the geometric idea of the Cross as an algorithm of this process. The Crucifix is an absolute model for the institute of martyrdom highly developed in Christianity. Martyrdom, in its many variations of dissecting and annihilation of the flesh, is an instrument of access into the Kingdom of Heaven, done as an imitation of Christ. The Cross working in tandem with a historical God becomes an extremely powerful instrument uniting ideology, axiology and spatio-temporal notions in culture (cf. Danilova 1975: 62–80). Naturally, the Cross as a graphic symbol appears long before Christianity, yet it is Christianity that makes its use regular to the point of universality. This does not happen all of a sudden: mythic-ideological, as well as graphic framework, develop gradually, step by step, crystallizing around it Space and Time categories within the human mind. What we are

dealing with here is the contemporary state of a certain mythological complex in the mind, which absorbed an entire historical paradigm.

The early Christianity continues to use the swastika cross (*crux grammata*), that is, a cross with a defined symmetry of rotation, without a consistent tendency towards definite spatial oppositions. Yet this cross has a vector of movement: left to right, in agreement with the solar movement in the north hemisphere (it is usually said that the swastika originated in the Sanskrit-based civilization). The aforesaid vector idea will covertly exert an influence upon the arrangement of Space around the now motionless fixed cross, along with the development of the regular field of the picture. Coptic Christian monuments adapt the Egyptian hieroglyph ankh (which stands for "life"), the so-called *crux ansata*, a T-cross with a loop on top. This cross, combining the male and female symbols, will much later transform into Rosicrucian iconography of the Rose (= *yonī*) crucified (Hall 1997: 506, 528). I suspect that these connotations are equally present in the graphic idea of the classical cross.<sup>5</sup>

It is not my objective within the confines of this essay to analyze the differences between the above shapes in their mystical fulfillment. The mystical interpretation, as a rule, is bound towards esoteric knowledge whose aim is not so much to explain as to complicate, "mystify". I am here interested rather in the "objective" properties of a geometric figure and their relationship to ideology and myth. This is why I limit or fix my analysis to a specific "visible" form, and yet, despite the absence of temporal historical boundaries to the problem, I still deem it possible to observe the issues in a clear prospective. Toporov describes mythological Space:

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<sup>5</sup> To be more accurate, there are four classic varieties: *crux quadrata*, or the Greek cross with four equal symmetric rays, *crux immisa*, or the Latin cross with an elongated bottom part of the vertical ray; *crux commissa*, T-shaped or St. Anthony's Cross; and *crux decussata*, X-shaped St. Andrew's Cross. I would additionally name the Pythagorean Y-cross (Hall 1997: 225), since the latter modification is co-existent with the other in the European iconographic tradition, as we will see further. All these varieties contain the idea of 'zero point' of intersection which can be associated also with the *yonī* (= vulva), yet in a more compact implicit way than in the case of *crux ansata*, allowing for a greater extent of generalization without contradicting the notion of regular partition of Space. On the varieties of the Cross and its link to phallic cult and the problem of choice understood as that of orientation in space, see Toporov 1982: 12–14.

For a mythological consciousness the Space is fundamentally different from the structureless geometric space devoid of quality and accessible only to the measurements, as well as from the real space of the natural scientist which coincides with the physical environment [...]. In the mythological model of the world there were none of these types of Space and, oftentimes, not even a word for Space. (Toporov 1997: 158–159, emphasis is mine — J. G.)

## 7. The Cross as an instrument of axiologized Space

Space with the Cross implanted into it from the neutral physical, turns into culturally heterogeneous intelligible, axiologically charged Space. Space thus begins to have a fixed (as opposed to relative) right and left, top and bottom, with their respective shades of meaning. As a consequence, this space becomes oriented.

The cross positioned vertically used to preserve the meaning of the spatial scheme, contrasting and uniting at once the pairs such as: top and bottom, heavens and hell, right (benign) and left (malign) sides. Perhaps, the Sign of the Cross used to represent a very simple and compact geometric formula of the basic spatial, temporal and moral oppositions which the medieval model of the world was built upon. (Danilova 1975: 66)

Danilova's very precise description, from my point of view, is still somewhat rigid, logically speaking. In my view, the Cross indeed represented the spatial-temporal correlations, yet it equally (and to a large degree) formed them in these rigid and clear-cut terms.

Particularly, given that the Cross itself is motionless (which is relevant at certain point in history: the Man hanging on it is a zero point of conversion of the world into the anti-world); it implies the possibility of choice and, therefore, that of movement. In other words, a possibility of drawing a graph of the regular correlation between Space and Time. Time, which the eye needs in order to cover a certain distance. Naturally, this correlation is depicted conventionally, yet from now on it is done regularly.

In pictorial art, it is to do with the dominant eye movements: firstly, along the diagonals (on the meaning in painting, defined by diagonals see Tarabukin 1973: 472–481). Development of the basic composition rules in Western European painting, the so-called regular field (Daniel 1986; 1990), including direct perspective, is directly dependant on the Crucifix as the organizing principle. The Space of

the ancient painting, as described by Panofsky (1991: 40–42), knew no regular co-ordinates or compositional guiding lines, as it was aggregate one. The eye had no guiding lines, next to nothing would limit its movement, hence the viewer lacked any freedom of choice. Meanwhile the mind lacked a system of co-ordinates.<sup>6</sup>

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<sup>6</sup> Pythagorean cross, which also presupposes the idea of choosing the correct or wrong path and also a conic reduction in the point of bifurcation, is less stable in its fixating the spatial oppositions. This is due to fewer options in terms of symmetry. Nevertheless, the need in this form is felt already in times of developed iconography of the Crucifixion. The Cross was not used as Christian symbol until Emperor Constantine's conversion in the 4th century. He also abolished the Crucifix as an instrument of punishment and execution, whereby as if legalizing its sacramental nature. Christian burial monuments the Cross is used somewhat earlier, circa 350 C.E. The depiction of Christ on the Cross would appear after the 5th century (until then image of the Lamb was used to represent the victimhood of Christ, i.e. a re-worked pagan form). From the 6th century C.E. depiction of the Crucifixion begins to have a widespread use, as it presented the dual nature of Christ. This was important in order to combat heresies, which saw in Christ the divine nature only, thereby denying his physical torments. These early images presented not so much the torments as the triumph over death: Christ was depicted with his eyes open. Only starting in the 9th century Byzantine iconography establishes the canon of the Cross with the dead Christ on it; this same canon is adopted by Western European art in the 13th century placing an increasing emphasis on the suffering of the crucified.

During the same period when the image of the Crucifixion became widespread, the idea of counting historical time from and after the Nativity of Christ began gaining ground. This idea came to be as a side effect of the dispute regarding the calculation (*computus*) of the Easter and was reflected in the Easter Tables compiled by Dionisius Exiguus, an Italian monk (circa 500–after 525 C.E.) The first official sanction was given to this calendar in England in 664 C.E. by the Synod at Whitby. This was championed by Venerable Bede (672/673 – May 25, 735) in his treatises *De temporibus* (703) and *De temporum ratione* (725). Yet the universal recognition in Europe this system gained only by the 11th century (Finegan 1964). Using this or that event as the starting point for counting time is certainly an archaic feature, yet in Christianity it is made law once again to become a common standard. Christ is placed into a certain point which at once becomes the end of history and its beginning.

The antiquity knew neither zero nor negative numbers. The zero was used in the Ancient Egypt to denote a blank space between the digits and yet even in this capacity it was not adopted by Greek or Roman civilizations. The zero as an independent numerological idea was introduced for the first time by the Arabs (by Al-Khwarizmi circa 780–850). In Europe the Arab algebra and the zero gain acceptance only in 10 c. thanks to the French mathematician Gerbert d'Aurillac (945–1003), who studied the abacus in Spain and would later become the Pope



The appearance on the scene of the fixed frame of a painting is also tightly linked to the process of orientation by the Cross. In fact, it is that same Cross, the same co-ordinate gridline and the same tool of setting boundaries and establishing a contact with the world beyond. The frame, as a conscious artifact, is a relatively late phenomenon. It emerges during the process of secularization of the visual arts not before the 15th century in Europe, just as the images are taken out of the Church and into the secular milieu. In church, the function of image, as window into the transcendental, is more or less evident. The crucifix in the Catholic temple or the Royal Gates in the Orthodox one provide the recipient with an orientation amid the sacred Space. When the image is taken out of the temple, in order to preserve the function of the contact with the world beyond, it necessitates additional guiding lines separating it from the chronotope of the recipient. These guiding lines are in effect supplied by the frame. Yet the cross-intersection of the frame functionally replicates the Cross of the Crucifixion story, therefore a situation emerges whereby the Crucifix can be extracted from the representational chronotope and the painting thus gains an autonomous secular life. Although, this does not imply an abolition of the transcending function of an image.

## 8. Cross and Pyramid: ideology of the graphic forms

The appearance of the direct perspective is the token of new awareness that the Cross (= frame setting the limits of the image plane) is a representation of the process of passage given in the *latitudinal section*. The pioneer of the direct perspective, Alberti, wrote: "The painting is a latitudinal section of a visual pyramid" (in Panofsky 1991: 63). Combining a cross-piece of the frame with a cross-section of the visual pyramid and the point of vergence in the eye of a viewer facilitates a horizontal (depthwise) adjustment, to be more precise: an adjustment of the three-dimensional space representation. The emergence of the frame and development of the perspective practically coincide in time. These innovations are inseparably linked and they radically alter the situation of the recipient's transcendence. Directed

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Sylvester II (999–1003) (about him: Chamberlin 1969: 115–121). As a matter of fact, Gerbert was also an inventor of chronometer and had contacts with the Russian prince Vladimir who Christianized Russia.

along the horizon line, this procedure which was unthinkable prior to perspective innovations in Andrea Mantegna's *Lamentation Over The Dead Christ* (circa 1475?, Brera), loses its hierarchical (and therefore value-based) reliance on the higher cosmos, ceasing to be necessarily sacred. All of which was definitely a consequence of having introduced the mechanism of perspective: "Perspective plays the part of a rigid inhuman machine which, as Leonardo figuratively puts it: "by its contractions helps turning around the muscle-bound body contour" (Danilova 1975: 43).

The process of transcending becomes a matter of technology and optics. All the elements of the mind mechanism acquire well-defined material shapes of a specialized device:

One of these devices is as follows: at the end of a table shaped as elongated rectangle, a rectangular frame with a glass is fixed, athwart the table's surface. On the opposite narrow end of the table a wooden bar is fixed, parallel to the frame. Along this bar another transverse bar is moving [sidewards] on a long screw. The latter bar has a [...] wooden pivot which can be fixed at different heights and having at its end a small wooden plate with a tiny hole. It is plain obvious: this device implies to some extent a *model* of perspective projection from the hole [...] onto the surface of the glass sheet, so as [we] look at the item through the aforesaid hole [we are] able to draw its projection on the glass. (Florensky 1993: 231; emphasis by Florensky)

All these rods, screws, orifices, frames and plates are substantiated (emblemized) elements of the mental construct of passage, comparable to a Passion toolkit. The process is fixed onto material objects, and this is what makes it regular and manageable, although significantly more limited in variations than if this fixation depended less on material structure. Yet, even though limited in variety, this technique supposedly acquires a style accessible to the masses whilst ceasing to be dependent on exceptional mystical gift/enlightenment of the author/maker: "Function of the devices is to allow for a replication of any item by the most unskilled draughtsman, purely mechanically, *without* the act of optic synthesis" (Florensky 1993: 231, italics is mine — J. G.).

Florensky clearly interprets the employment of direct perspective technique reflecting a peculiar ideological shift of consciousness:

The need to forge a doctrine on perspective for a whole group of intellectuals and very experienced painters over several centuries, including a number of top-class mathematicians, all of this done clearly *after* having already taken account of the basic principles of perspective projection of the world, makes [us] think that the historical task of development of the perspective was **not** about simple systematization of the pre-existent [features] of human *psychophysiology*, but rather a forceful re-education of this *psychophysiology* in terms of abstract demands by the new worldview. (Florensky 1998: 62; italics by Florensky)

Once the process is oriented this way, the transcendental realm is able to have an interpretation different from the religious interpretation. In fact, this very thought is expressed by A. Losev when he talks of “egotism” of the direct perspective: “When we are presented with an egotistic orientation towards the reality of the outside world, this is reflected on the image as a *central perspective of the lines coming together*; it is a space that is [both] closed and concentric” (Losev 1991: 95, italics by Losev). Until then, images displayed some kind of significant ambiguity in relation to how this transition is facilitated. On the one hand, image was a window into the transcendental, i.e. it directed the viewer’s attention horizontally, transversely to the painting. On the other, the Crucifix, with a horizontal bar shifted upwards, suggested a clear vertical orientation, following rather a pyramidal model. Vertical direction was far more structured and regular: the rules of proportions developed in antiquity were used and enforced, except for depictions of depth, i.e. horizontal narrowing of the perspective. All comforts were given to the upward view: “The Middle Age [...] gives vertical [line] a full priority” (Florensky 1993a: 185). This is also supported by architecture, particularly of the developed Gothic variety.

The structure of the Gothic temple, by the way, combines within itself the strategies of the cross and pyramid. A very elongated pyramid, the broach, pointing right at the sky while the plan is cross-shaped. As a matter of fact, these two geometric figures represent varieties of the reduction of Space to the zero point: progressing (pyramid) and forceful (cross). In other words, this is same procedure done in different sections: latitudinal (pyramid) and longitudinal (cross). The Crucifixion image itself quite often is stratified, showing both principles at once: Christ’s arms, lifted upward in a V-style, suggest the geometry of a cone with its peak pointing downward, whereas the Cross clearly sustains the right-angle partitioning scheme. Both as a storyline and an image, the Pythagorean problem of choice between the right and wrong paths in the

Crucifixion composition is oftentimes symbolized by the figures of “good” and “evil” thieves crucified alongside Christ and positioned to the right and left hand of him respectively.

The arms raised V-style are immediately related to depictions of victory in Western European iconography. Meyer Schapiro analyses this framework using the example of Moses’ combating the Amalekites (Schapiro 1973). A wider cone (almost approaching the Cross) is also used in the Orthodox iconography: the Mother of God Oranta and also the Pantokrator. Moses’ arms raised in prayer directly affect the course of the battle: while he kept his arms raised the fortune was on the side of Israel; as soon as he, exhausted, dropped them down, the enemy would regain strength. Furthermore, the arrangement of the arms may approach the V-style to a varying degree. They can be also interpreted as pyramid-shaped joining of the palms of hands (an upside-down V-style), a prayer gesture of the Roman Catholics. This attests to synonymy (or even procedural synonymy) of the three graphic versions of the contact with God. Apart from that, the victorious gesture, in particular, the military victory in a reduced form, echoed in the ‘victory’ gesture by Churchill, already mentioned at the beginning of the current essay. As we can see, it successfully blends into the more general rule of graphic representation of the contact with the transcendental. Churchill’s gesture can be interpreted in this context as *in hoc signo vinces*.

The cross, with a historical God affixed to it, halted the cycle of births and deaths, or stretched it in a way that made a mind category exclusively. Canonization of unity of this event led, as a result, to its being understood as zero point on the time scale: Time now accumulates at both sides of the Crucifix in accordance with the hourglass paradigm. The place of the Cross in the graphic composition along the axis of symmetry became a visual affirmation of this principle of the zero-value centrality of the here-and-now. Which is why Bible history, in particular, was understood throughout the Middle Ages, as well as the Renaissance, as immersed into the present, which was expressed by the depiction of an entourage contemporaneous with the painter. Historical time divided by the cross in two suggests a “before” (past) and an “after” (future), as well as the zero-value “here-and-now”. The selfsame verbal formula while accompanying the act of making the Sign of the Cross, re-affirms this unfolding of time to the sides of the central axis of the Cross=Present.

The expression “Now, and ever, and unto the ages of ages” or the four-part version “Always, now, and ever, and unto the ages of ages” (Latin: *In principio, et nunc, et semper, et in saecula saeculorum*) contains a conglomeration of tautologies, which can only be explained in terms of graphic properties of the Cross as signifying the unfolded Eternity spreading itself into the past and future. Additionally, the four-part formula contains the idea of the top point of the Cross (= forehead) also opening itself to Eternity at the time of performing the Sign of the Cross. The Latin formula clearly shows this higher infinity stands for a more universal and fundamental law of being.

## 9. Composition of the Cross and deviations from the canon

Only as a backdrop to this fixed symmetrical composition arrangement, could deviations from this canon become possible, with the deviations facilitating the semantic effects of a universal event individually interpreted (since without restrictions there is no choice and thus no freedom). To illustrate the above, I will be attempting an interpretation of several striking examples of the well-established multifaceted canon demanding its own restoration. It was not my objective to trace the evolution of styles or genres of painting. I was concerned rather with the framework of motif-imagery, superposed onto the geometric canvas. Therefore, I opted for the analysis of the texts, myself deviating from their historical succession: the logic of outlining the framework of graphic motifs was more important to me.

### 9.1. Giotto

A sufficient enough deviation from the canon can be observed already in Giotto's work. No wonder Florensky considered Giotto as a turning point for the development of the new, personalistic, egotistic consciousness (Florensky 1993: 209–210). Alpatov characterized the technical innovation of Giotto as follows: “Living characters of the Christian story are equated by him to regular bodies, arranged in accordance with laws of equilibrium and rhythm” (Alpatov 1976: 37). According to Alpatov, Giotto (as well as Renaissance art as a whole)

impersonates the demonstrative/entertainment properties of art (Alpatov 1976: 149). Taken within the scope of issues raised in this paper, this is primarily about functional and conceptual change in eyesight/optics/gaze paradigm. Prior to Giotto (and even in the aftermath) the actants of image are not encountered by the gaze (in all probability, it is implied that they do not see each other but outside the depicted and observed Space, “in the eyes of the soul”). Whereas Giotto, in *The Kiss of Judas* (fig. 3), makes Christ and Judas look into each other’s eyes in a way that the eye contact is very tangible. Firstly, this immediately immerses the scene into the *here-and-now*. Secondly, it raises the issue of the contact with the transcendental in a completely new way by re-interpreting it as “individual-nominative”. The gaze (of the mind establishing/detecting the contact) is not detached from the organ of sight. It rather coincides with the specific individual eye of the depicted character, as if being named, identified in a specific way, used as a plotline motif.

Besides, both Christ and Judas are depicted half-face. Incompleteness of a face in relation to one who is the incarnation of the wholeness of being in the universe creates the scenario of a bunch of multifarious interpretations of this contradiction that, certainly, could be felt as an expressive shock bordering on sacrilege. On the other hand, the half-face represents a vector of the will power, marked by a lack of equilibrium in the contour (Florensky 1993a: 148–149). The half-face requires a compositional opposition between the external object and subject. Giotto's image of Christ's half-face is restored to the state of being a compositionally complete full-face with the help of Judas' half-face — a shocking thought, even to the early 20th century mindset (at least in Russia, where, for instance, L. Andreev's *Judas Iscariot* which made use of the same idea, caused an emotional reaction of the public).



Figure 3. Giotto di Bondone, *The Kiss of Judas*. Fresco, Capella degli Scrovegni, Padua, 1305–1313.

Perhaps, in purely graphic terms this technique was not such an outrageous thing in Giotto's days. Both Romanesque and overall medieval images quite often portray the encounter between the two characters as a joining of two half-faces within a single format. Yet Giotto does this in an accentuated and conscious way. Meyer Schapiro (Schapiro 1973: 45–46) is superb at analyzing this trend. As he points out, the artist sets apart the half-faces of Christ and Judas, while placing the observing guard in the background, behind them. Thus, three faces are presented at once: Christ, Judas and a third observer mirroring the gaze of the recipient viewer. This is a very powerful

mechanism of organizing the Space along the horizontal line of the recipient's frontal gaze: a point is set "behind" the scene. Moreover, it is a considerable shift with regard to the process of becoming aware of the graphic image's autonomous role as an interpreting mechanism. In other words, in Giotto's work it is not the word, but a vision/image that is expressly shown to be the instrument of contact-translation.

## 9.2. Judas' Kiss and the hourglass configuration

The motif of Judas' kiss and suicide is quite significant within the mythological framework discussed here. On the one hand, it is a reference to the widespread cultural mythologem of the kiss resulting in death or a kiss which takes the last breath away. A mythologem mediated by the idea that the soul-word leaves the body or flesh-space via mouth, binding this plotline with the process of speech-genesis applied to the Word of God. On the other hand, it allows seeing this encounter as the two vessels' mouths touching each other. This touch is lethal for both. Although, if the death of Christ is relative and, in fact, means eternal life, the death of Judas is then absolute, expressed by the blocking the vessel's hole by the rope on his throat. The lower section of Giotto's *The Last Judgement* (fig. 4) denoting Hell, situates the figures of the hanged bodies: one of the sinners is hanged by the tongue! The death of Judas, who hanged himself on the tree (to each ethnic culture it's "their" special tree), reverses the death of Christ on the tree of the Cross (certainly, we are dealing with the cosmic tree – something that was many times pinpointed by researchers; see Toporov 1982). The Cross, as a result, is an unfolded version of death-birth, while the rope of Judas is the closed no-exit version. Meanwhile, the body of Christ, ever incorporated in the communion bread, is included into the unfolded cycle of grinding in the mouth of the communicant.





Figure 4. Giotto di Bondone, *The Last Judgement*. Fresco, Capella degli Scrovegni, Padua, 1305–1313 (fragment).

This collection of ideologems and motifs, including geometric constructs such as the hourglass, also defines the chronotope of the *Divine Comedy* in a most generalized fashion, as noted by Florensky (Florensky 1922: 45–47). According to the legend reported by Vasari in his *Life of Giotto*, Dante was a close friend of the painter, having composed stories for his frescoes (Danilova 1970: 5–6). The legendary character of this friendship is, perhaps, more significant than its reality: had there been no such friendship, it would have had to be invented for a number of *mythogenic* reasons.

When *Dante*, the character of the *Divine Comedy*, descends with his guide to the very bottom of Hell, he finds the three-faced Devil (who fell off and betrayed God) eternally gnawing the three traitors, among these Judas. Three faces of one head, a common allegory of the three modes of Time, known from antiquity and interpreted in the

emblematic tradition as Wisdom which comprises three elements: *memoria*, *intelligentia* and *prudentia* (see Panofsky 1982: 146–168; Yates 1997: 133, 213). Dante, certainly, reverses the meaning of this allegory, ascribing it to the Devil who sacrilegiously parodies the Trinity. Yet the skeleton of the scheme, while the sign meanings are switched to their opposites, still remains just as the link to the three-fold nature of Time. Besides, Dante provides the Devil with a set of vampire-bat wings, which is one of the standard iconographic attributes of Saturn (Panofsky 1980; Klibansky, Saxl, Panofsky 1964). Furthermore, the traitor Lucifer devours his (equally treacherous) siblings who are his own creatures which, it appears, may give additional reason to link him to the personifications of Time. The mouth of a monster is one of the most common iconographic motifs in the Middle Age — it stands for the entrance of Hell. This is a motif which survived in the form of an easily recognizable, albeit more amusing than monstrous, theatrical requisite of the Renaissance. I posit that the motif of the Saturn's voracious mouth along with the Hell's larynx have a shared base motivation in the geometry of grinding at the crossing of the "final line".

Thus, Dante and Virgil descend further walking away from these larynges, stepping all along onto Lucifer's body, down toward "where at the thigh // Upon the swelling of the haunches turns" (XXXIV: 70–71)<sup>7</sup>. Then while reaching the point "On the other side the centre, where I grasp'd // The abhorred worm that boreth through the world" (XXXIV: 101–102), they turn upside down: "when I turn'd, thou didst o'erpass // That point, to which from every part is dragg'd" (XXXIV: 104–105). The road turns out to be the way upward into the celestial spheres broadening gradually. Florensky interprets this chronotope as Non-Euclidian Space. It would be too daring on my part to contest a professional mathematician's view. I suspect, however, that there is a much closer source for Dante's imagery: it is the system of allegoric emblematic and geometric-ideological invariants of sacred images. Perhaps, the notions of chronotope in mythology do indeed differ from Euclid's geometry. Yet, it seems to me that the model described by Dante is indeed a reduction which works along the lines of hourglass with a gullet (connected to esophagus or phallus) by which the Time is ground into time periods: "Morn // Here rises, when there evening sets: and he, // Whose shaggy pile we scaled, yet standeth fix'd, // As at the

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<sup>7</sup> Dante's citations are from: Dante 1909–1914.

first" (XXXIV: 112–115). The model is also enantiomorphous and reversible in the same way as the hourglass device.

Giotto's "three-faced" model is as if turned inside-out: all three gazes focus on the central point which also involucrates the potential viewer. This meeting of the gazes in one point, a communicating and visual Cross, creates a situation of Time's "hanging up" in the communication insight. The connotations of the dissected "Time" emerge upon the projection onto the aforementioned allegoric figure. Certainly Giotto too, just as Dante, subjects this figure to an essence-transformation. Nevertheless, the traditional meaning is still discernible and may assist the interpretation. This prelude to the Crucifixion presented as an act of communication, is a dispute between life and death. On the one hand, communication is understood as an *apparent* juxtaposition of the subjects, localized and arranged in Space. On the other hand, it operates as a translation of the word (kiss) into image (gaze). The fact that the recipient-viewer is involved in the development of this Cross elevates the probability of transcendence for the former. Whilst the fact that this Cross in the plan would have presented itself only from God's viewing point, as the plan of the church, as it seems, contradicts the vehemently negative view on Giotto's religiosity espoused by Florensky. After all, Florensky himself appears to sympathize with Luther's quote: "We look at Time *along* whilst God sees it *across*" (Florensky 1993a: 275).

### 9.3. Cranach the Elder

Half-faces, long after Giotto, remain reserved for the donators, who do indeed represent the closeness to the 'I' of the viewer. Yet their gaze running parallel to the surface of the picture is indeed a mind construct. When it comes to this procedure of the imaginary vision, physical variables of sight are ignored. Full-face and open eyes as privileges of the 'transcended' characters such as the Saints or Madonna. Speaking of composition, the Crucifixion here invariably occupies the symmetry axis. As a backdrop of this stability, any deviations with regard to the scheme require a definite interpretation effort, that is, the process of reception (in case of sacred image, also transcendence) ceases to be automatically conventional.

Lucas Cranach, in his celebrated composition (fig. 5) moves the Cross to the left and gives it a rotation so that it is seen half-face: this makes for an unusually strong emotional impact. Christ is no longer the zero-axis of the given algorithm: rather an individual whose uniqueness is no longer that of an exemplary being, but of an individual. Besides, this technique transforms the whole of spatial arrangement: Space, as representation, acquires volume, ceasing to be the penetrable-impenetrable plane of the window/borderline into the transcendental. The viewer's gaze is made at home with the frontal position of the Cross, the viewer now is able to imagine a vantage point within the constructed Space of the painting: from the depth, on the left.



*Figure 5.* Lucas Cranach the Elder, *The Lamentation Beneath the Cross*. Alte Pinakotek, Munich.

The 'I' of the viewer becomes ambivalent while assuming various perception stances. The 'I' looks at the painting in a normal way, facing it upfront, yet the unusual composition forces the viewer's mind to reconstruct the position of the 'I' at the left facing the Crucifix. The actual viewer assumes the position of the Virgin Mary, whose gaze is directed at Christ upfront (or nearly upfront: the Cross is still slightly turned towards the viewer, this being inevitable tribute to conventional forms of perception in order to prevent the scheme from being completely obliterated). This is not a virtual gaze of the donator along the surface of the painting: rather it is a communicating gaze left unanswered. It is as if the gaze of John attempts to compensate for this lack of response, setting a plotline and graphic opposition-rhyme "live-dead", enhancing the visual and intellectual perspective of the viewer identifying himself with Christ.

#### 9.4. Rembrandt

The Cross in all this becomes mobile in the mind of the author-recipient. It makes possible the freedom of choice being defined by a fixed system of co-ordinates. Rembrandt arranges the Crucifixion composition as *Elevation of the Cross* (fig. 6), namely, the Cross hasn't yet taken the place usually accorded to it: that at the central axis of symmetry. Rather, it is situated along the strong "natural" diagonal, bottom left towards top right. And thus, the whole dynamic of the event come to depend on the effort of elevating the cross as *against* the "natural" direction of reading the painting. One plotline effort of sustaining the Cross in an inclined position was far from sufficient for Rembrandt. He creates several visual counterbalances: a pyramidal shape at the back, a bent figure on the left and a cruciform shovel stem (at the bottom right) as if suggesting the next phase of incline for the Cross in a desired direction. Otherwise, the whole composition would hopelessly "collapse" to the right (fig. 7).



Figure 6. Rembrandt van Rijn, *The Elevation of the Cross*, 1633. Alte Pinakotek, Munich.

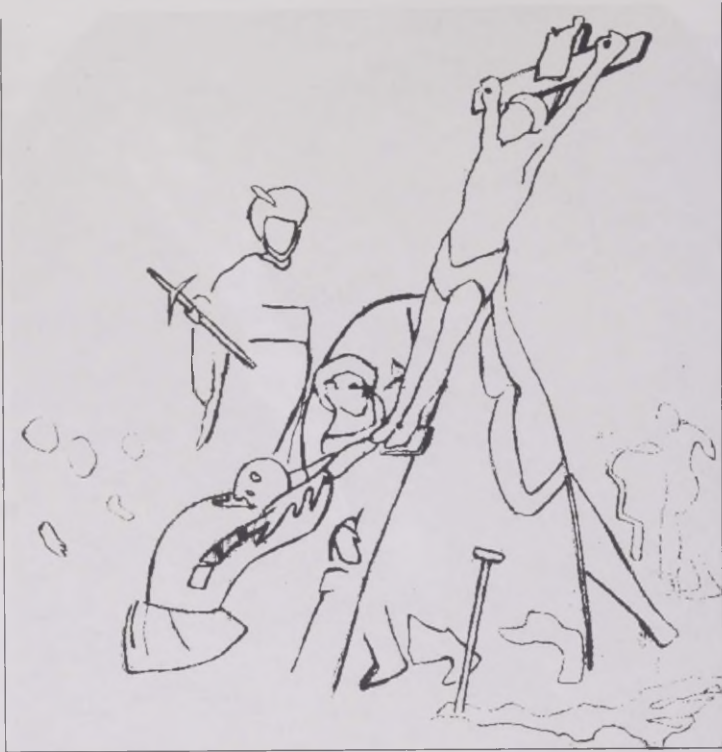


Figure 7. Outline for Rembrandt's *Elevation of the Cross* (fig. 6).

The “abnormality” of the Cross’ position makes the viewer to perform the task of reconstructing the conventional one, just as it was in the Cranach’s case. Otherwise, if such a task were to be completed graphically, it would follow that the Cross erected and made to stand vertically would cover the officer (the representative of the ruling authority, “of this world”). Yet neither a restored Cross would fail to stand along the central axis due to being shifted towards the left side, a more steady side of the regular field. Whereas there exists an alternative type of organizing symmetry, a rotational symmetry. It is also incomplete, if not vague. It is suggested initially by a bent figure in a flashing black armor, followed by the same trajectory along the bright neck of the horse. Using this bright spot as a background, Rembrandt paints his self-portrait, almost at the center of the image —

this is a sort of clock dial of the event registering the peculiar idea of the painter's role in the metaphysical as well as historical ceremony. It is the painter that takes up the zero point of the intersecting axes. The clock analogy (in the most "effect-frequency" sense of Time) here is almost perfect: the long hand is the Crucifix, the short and less visible one is the officer's sword with a cruciform handle. The "clock" shows 10:10. The above said does not mean that Rembrandt intended to depict the actual clock, it is just that he used the same geometric framework relevant even to this day, as an advertisement for watches.

### 9.5 Brueghel the Elder

Having attained to possibility of movement, the Cross makes use of it also through rotational symmetry. The dormant memory of the swastika and wheel re-awakened in an updated form against the backdrop of the established static scheme. Brueghel in his *Road to Golgotha* (fig. 8) expressly states this synonymy of cross and wheel both in terms of composition and motif. As is typical with Brueghel, the painting is structured in terms of the "Find Icarus" principle. An array of tiny figures cover the landscape dominated by a rock with a windmill placed on top of it. This is the dominant vertical line of the whole composition, which is identified with Golgotha along the lines of the biblical tradition. Here the impossibility of an exact translation between the word and image is highlighted. It is for the artist to decide the way the mountain has to look. The rock is situated within a V-shaped glen at the frontier between sky and earth, light and shadow — a terminus of sorts. Second vertical line (echoing the rhyme of the first one) is the wheel on a pole. The wheel almost coincides with the right edge of the frame (a proximity to the frontier, though of a different kind). The windmill, a moving wheel giving bread=life stands in opposition to the motionless wheel of death both in terms of semantics and functionality. The wheel on the pole is a near-sacrilegious iconographic parody of the Crucifixion: in its vicinity instead of the skull of the first man Adam there lies a horse skull, while Mary and John are nearby. The viewer is to be more and more bewildered: where are the familiar traditional Golgotha, the genuine Cross and Christ?





Figure 8. Peter Bruegel the Elder, *Road to Golgotha*, 1564. Kunsthistorisches Museum, Vienna. Outline for *Golgotha*.

I cannot insist on a specific order of discovering these objects: Brueghel's space is very fragmented, almost stochastic. Apparently, he is more inclined to work with semantic motifs than geometric universals. And yet... The Cross with Christ who fell and is lying at the bottom of it, can be found at the very center of the composition, amid the conglomerate of the flickering tiny characters. Whereas the Golgotha, beneath the wheel, to the left, is a sort of an empty elliptic tonsure-like (almost the 'Bald Mount' motif, although there is no sight of any mountain) space surrounded by the mob growing black. All in all, the Cross is gravitating towards the windmill, whilst the Golgotha towards the wheel. The motif rhyme of the image is becoming two, along with the juxtaposition. As a result, the Christ is bearing his Cross in order to combine it with an empty circle. What would result from this procedure, whether it is the wheel of life or death, is left unanswered. However, there is an evident geometric and metaphysical problem being suggested by it all: to combine the dissecting tool of the Cross with the full cycle of the circumference.

In the Renaissance iconography to the North of the Alps, executions done using the cross and the wheel are closely linked. (This motif is discussed in Mitchell Merback 1999, *The Thief, the Cross and the Wheel. Pain and Spectacle of Punishment in Medieval and Renaissance Europe*). The death on the wheel is even analyzed as "an emblem of state-sponsored death") inscribed within the same historical pattern alongside the guillotine and the gas chambers (Merback 1999: 158). Thus, the mechanistic nature of all these methods is highlighted: they are the "machinery of death". This appears to be convincing enough in the light of the retrospective judgment of progress within the European consciousness having promoted the wheel as the most important stage of technological civilization, "the Wheel of Progress", to use a linguistic cliché. And yet, Merback supposes that all the possible "solar" mythological interpretations of this instrument of murder lack any foundation, contesting the various statements, such as:

The very shape of wheel and the cross, the very act of crucifying pinpoint the ideas of the cosmic order which are not felt, perhaps, only by the victim presented on the altar for cosmic purposes. (Merback 1999: 6)

As an historical source for the origin of the execution by wheel, Merback cites Gregory of Tours who in the 6th century mentions the

execution performed among the Franks: the criminal lying on the ground had his bones crushed by a heavily-laden wagon. It seems to me, this indication of genesis does not eliminate the “ideological” motivations either: only those figures and objects remain preserved throughout all times that satisfy a multiple range of variables. Frankish execution style, although evidenced by written records, does not explain, for instance, why in later times the victim (that is, the body with its bones crushed by the wheel) was placed on the another (large) wheel located at a high spot, so that the “birds of heaven could fly above and beneath the unfortunate”. (Written records are equally in need of scrutiny, given that the medieval mind was prone to mixing history and myth and that a vast number of written historical and geographic testimonies from that era contains the mention and even graphic depictions of all sorts of fantasy creatures.) Moreover, the iconography of the execution by the wheel will closely approach another emblematic motif, the Wheel of Forture: an obvious metaphoric transposition of the idea of the change of the cycle phases onto the reality of punishment.

### 10. The Cross and and the Dial

A superposition of the Cross onto the Wheel occurs in the clock during the period when they begin combining a dial (guided by the fixed geometry of the Cross — division into quadrants or quarters) with the rotating hands. First public clock appeared in the 16th century. Set in motion using the weights, they implicitly suggested that the motion of Time was dependent on vertical orientation, the gravity force. The spring clock was invented in the 15th century. The spring clock's appearance recreates the more archaic solar clock, although the latter was never able to enact the full-circle rotation of the shadow-hand. The dial of the mechanical clocks perfects the reality unto an abstract ideal. The concept is more or less identical throughout the various specimens: a cross inscribed into a circle, both motionless and rotating at once. This model contains a graphic and ideological analog to the physical properties of the valve and the screw.

A good number of mechanisms enabling to control access/sealing-off properties (i.e. border control) are used in culture. These functions

can be assumed by a (fishing) net, a metal grill (a version of which is none other than the cross), a window, a glass, a door, a threshold (as well as the various terminus-type devices, such as *Jacob's Ladder*), a keyhole (or a very tiny hole as in the camera obscura), the skin, the veil/cover (packaging) and so on *ad infinitum*.<sup>8</sup> No doubt, all these motifs can be used in literature, arts and culture at large, as plot elements in their "nominative" function. Otherwise, as a graphic/structural basis of the whole narrative or image, that is: operating as a dominant feature within the composition, including the purely technical tool to enable projection of the visible Space onto the surface plane (cf.: "This precision in reproducing the Nature, according to Alberti, is ensured by the use of *velum* (a grid) enabling to transfer everything that is visible through it onto the paper which has the same grid [pre-stamped] on it", Alpatov 1976: 58). Typically, both principles co-exist within the same text.

El Greco structures the composition of *The Annunciation* (fig. 9) arranging two interconnecting worlds in the shape of hourglass with a dove in the middle, where the orifice between vessels is located. The dove twists the composition (as if with a screw) relative to that center of symmetry. The dove (=Spirit, Word) exercises the function of a plotline and composition mediator.<sup>9</sup> El Greco's composition tends to "swirl" into a funnel and dissect the space according to the touching vessels principle.

It is much later, towards the late 19th century, that the new awareness of unity between the historical and cyclical laws in Time, between mythological and civilized consciousness, led to an explicit realization of the entire compound described by us in art. An avant-garde painter could afford to say: "At the top of your Golgotha [...] there is a wheel". This avant-garde attempt of reverse metamorphosis of the Cross into Wheel is analyzed by Mikhail Yampolsky with regard to intertextual situation surrounding Abel Gance's movie *The Wheel*

<sup>8</sup> For further discussion of the semiotics of frontier/border in art, see Grigorjeva 1997: 22–52.

<sup>9</sup> On the analogy between the cross and the bird with open wings see Toporov 1982.



Figure 9. El Greco, *The Annunciation*, circa 1600. Baron Thyssen-Bornemisza Collection.

(1921): "A cross rotating with madness adopts the shape of the wheel. Which is why at the top of your Golgotha, dear Gance, there is "The Wheel"". And furthermore:

Religious motives are good in explaining also: why did the medieval theologians were so frenzied in attacking the perpetual motion and confessed the finite nature of movement, declaring the perpetuum mobile to be incompatible with the science on God. (Jampolsky 1993: 219, 223)

This rotating cross has discredited itself following the mythical quasi-incestuous syncretism of the Nazi swastika. Yet the swastika has proven to be only one of the expressions of a more large-scale trend. Symbolic force of the screw becomes an object of graphic depiction, an object that is detectable upon a simple translation of an image into word.

Dali, in his *The Virgin of Guadalupe* (fig. 10), brings together the concepts of the screw and the rose, contrasting them against (as well as equating them to) the framework of the lily-cross. At the base of a clearly pyramidal framework, he introduces the lily, which symbolizes purity or heavenly love, in the shape of a small 4-blade windmill. The lily rises from the hole of a glass vessel located at the very frontier between heaven and earth. From this orifice the whole figure rises, like the jinn out of the bottle. The roses, forming concentric circle around the pyramid, repeat this form of a screw in a multiplied version. A marked indifference towards 'realistic' pictorial causality linking the symbolic elements compels one to "read" this composition in terms of a mythological neology. The geometry of the myth is thus accentuated and becomes the dominant feature of an image.

The Crucifix and the clock are explicitly united in the numerous Crucifixes by Chagall (fig. 11, 12). He expressed that which was gradually taking a clear shape over the course of Christian history: a common pattern in the workings of the mechanism. Both visible (geometric) and metaphysical principles of their organization are consistent through and through. And both represent collective metaphors of a specific type of mind frame. In his geometric preferences Chagall gravitates towards the hourglass form (it would suffice to recall his celebrated compositions: *The Muse Inspiring the Poet, Wedding, I and the Village, The Fiddler*) as well as towards the circles divided into sectors. His graphic work *Motion* (1921, fig. 13) is



Figure 10. Salvador Dali, *The Virgin of Guadalupe*, 1959. Private Collection, Madrid.



Figure 11. Mark Chagall, *Crucifixion with a Clock*.



Figure 12. Mark Chagall, *Golgotha*, 1912.



Figure 13. *Motion*.



an expressly stated reflection on the cross=wheel=swastika with a human face residing in the point of symmetric rotation. In *Homage to Apollinaire* (1911–1912, fig. 14) Chagall places an androgynous character against the background of an abstract dial-cross: it is Adam and Eve, indivisible yet distinct on the Cross and on the Wheel of Time with a symmetry point in the genital area, or, in Jungian terms: anima and animus.<sup>10</sup> Furthermore, Chagall has another composition noteworthy to our subject, *The Crucified Ones* (1944, fig. 15). Crucifixes located along the road which gets contracted along the perspective. It is an organic combination of a legendary historical narrative (Via Appia), the macabre *here-and-now* reality of the Jewish settlement following a raid, as well as the realization of the Cross and the direct perspective as being functionally identical.



Figure 14. Mark Chagall, *Homage to Apollinaire*, 1911–1912.

<sup>10</sup> On androgynous nature of Christ see Meeks 1974: 165–208; Bynum 1984.



Figure 15. Mark Chagall, *The Crucified Ones*, 1944.



Figure 16. Maurice de Vlaminck, *Road Under the Snow*, 1925.

To provide a further analogy: the almost identical composition by Maurice de Vlaminck (1925, fig. 16) is worth a mention: here the Crucifix is absent, yet the snow is falling. These tiny particles, a result of the fragmentation of the matter, facilitate a mutual penetrability of heaven and earth in a horizontally oriented cone of a reductionist perspective of the visual pyramid. I already referred in this essay to the emblematic metaphor of the tiny particles. Jean Effel, both consciously and ironically, identifies the mechanics of the process of the Creation of the Universe with the work of God the Miller (fig. 17–19).

Apart from the specific painters distinctly displaying a clear tendency towards interpretation of the aforementioned mythological compound (El Greco, Chagall, Dali), there exist a range of formal semantic preferences, as if requiring interpretation within the framework of the motifs highlighted here. Among these definitely can be mentioned, for instance, various depictions of the female body and the tree within a diverse range of connotations (fig. 20–22). It appears to me, that these or similar examples need no further commentary in the light of what has been said above. The argument that the female body “in deed” gravitates towards the hourglass, cannot be deemed suitable here. The *depiction* of the female body is far from adhering to the said form throughout the ages: Neolithic Venuses are clear evidence to this. In the Middle Ages the contour of the Madonna, for instance, is tending rather towards the pyramid shape with an upward reduction. (This pattern was used by Dali in *The Virgin of Guadalupe*.) Meanwhile the medieval canon of the Crucified presented a downward V-style reduction. Thus, The Star of David as a symbol of androgyny was split into two distinct characters: it is this very method that is used in symbolizing the gender difference on the restroom door signs. Furthermore, the pictorial canon in art does not always coincide with that of the ideal feminine body exploited, say, by fashion. In the 60s, for example, when the Twiggy ideal was dominant, that of an almost shapeless two-dimensional line, artists continued to use the pattern of vessels narrowing towards the waist.



Figure 17–19. Jean Effel, from *The Creation of the World* series.



Figure 20. Anton Sladek, *The Nature*, photo, 1989.

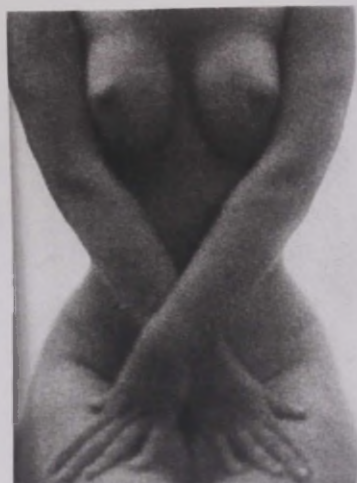


Figure 21. Kalju Suur, *The Hourglass*, photo (from the book: *Seinast sein*, 1995).



Figure 22. Käthe Kollwitz, *Hunger*, 1925.

## 11. Why 10:10?

Finally, as a rhetorical device, let us return to one particular question, posed at the beginning of the chapter. Why indeed do the clocks/watches ever show 10:10? Considering the above said, let us attempt to work this out by the means of contraries: which other time may the clocks show in advertising? 12:30 and 6:00 may not represent the passing time, just as the right-angle versions of the clock hand positions, i.e. the quarters of an hour. “A half cut by half”, the selfsame Cross model, a zero-nought point outside Time: this is not Time, but a state, a metaphysical state of passage, not real but thought, imaginary. The objective of the advertising is rather modest: to it is enough that the clock is working. The same, but to even a greater extent, applies to 12:00, noon, midnight it is neither Time nor Space, but a frontier which is by definition neither one nor the other and yet is both one and the other. If the clock hands end up being at the bottom of the dial (e.g., 5:40), the model is again far too static (upside-down V-shape), this time due to the notion that the pyramid with its base on the ground sort of uproots the clock hands within itself. This pattern is, rather, about the past (compare to the hourglass), it is closed (e.g. the steep roof of a house/refuge), although to some extent can be oriented towards the contact with the Other, but passively, so to speak. The only option remaining is 2:50, when the hour hand is pointing to the right. In this case time will reverse itself in the backward direction! The long arrow has to coincide with the “natural” diagonal along which the image is interpreted, that is, clockwise (or along the visible solar movement trajectory). Let us recall the way Rembrandt counteracts this natural collapse of the arrow left to right. If the difference in the length and thickness of the clock hands is not too well-defined, such an arrangement becomes synonymous with 10:10; whereas if the difference is significant, it clearly results in the “counterclockwise” movement. At any rate, whenever it is necessary to depict the clock working backwards, it is 2:50 pattern that is employed (fig. 23).

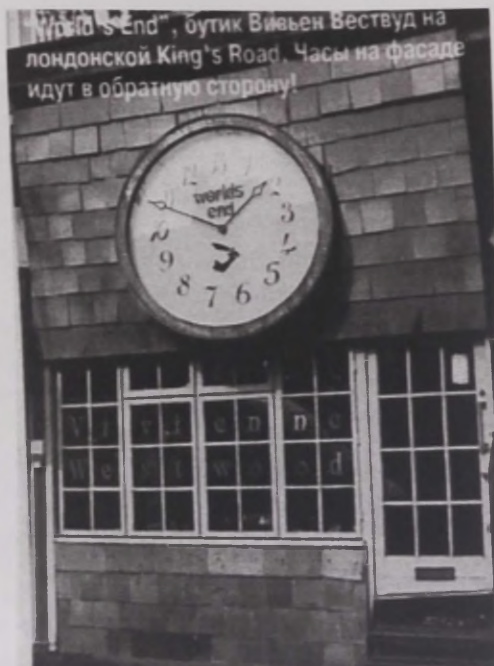


Figure 23. The clock is indeed moving backwards (from: *Burda Moden Magazine*).

There is obviously an intuitive feel to the goodness of 10:10 pattern which is dynamic, optimistic. This simple matter-of-factness of this particular example is linked to more universal rules of cultural consciousness than it may appear at first glance, which I have attempted to demonstrate. The premise I use, is that culture, as a product of consciousness, is a meaningful whole, a *semiosphere*, to use Juri Lotman's term. Henceforward, it is, being a pragmatic framework, by all means open to inquiry and has an explanation, just as its constituent parts equally have an explanation in all their existing modalities. Within the stated compound of issues it is primarily a modality of visible problems representing the more abstract conventions, in other words, signification relationships of emblematic kind.<sup>11</sup>

<sup>11</sup> An earlier version of this article has been published as Chapter 4 in Grigorjeva 2005: 130–174. Translated by A. Magergut.

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### Пространство-время: мифологическая геометрия

Статья рассматривает фундаментальные графические модели, которые используются культурным сознанием для закрепления в коллективной памяти абстрактных понятий. В статье затрагивается также проблема интер-семиотического, то есть эмблематического, перевода категорий пространства и времени друг в друга. Модели креста и пирамиды анализируются с позиций их идеологической (трансцендирующей) функции в качестве механизма эмблематизации абстрактных понятий пространства и времени. Данный подход помогает пониманию основных законов культурной ментальности и процессов эмблематизации значения любого феномена в целях его структурирования и мнемонической фиксации.

### **Ruum-aeg: Mütoloogiline geomeetria**

Käesolevas artiklis käsitletakse graafilisi alusmudeleid, mille kaudu kultuuri-teadvus kinnistab abstraktseid mõisteid kollektiivses mälus. Vaadeldakse ka intersemiootilise ehk emblemaatilise tõlke probleemi — aja ja ruumi kategooriate teineteisesse tõlkimist. Risti ja püramiidi mudeleid analüüsitakse nende ideoloogilistest positsioonidest lähtudes kui aja ja ruumi abstraktsete mõistete emblematiseerimise mehhanisme. Antud lähenemine võimaldab kultuurse mentaalsuse ning iga fenomeni tähenduse emblematiseerimise protsesside põhilistest reeglitest arusaamist, ühtlasi seda fenomeni struktureerides ja mnemooniliselt fikseerides.

## **Ethnolinguistic identity and social cognition: Language prejudice as hermeneutic pathology**

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**Abstract:** Analysts studying the nexus between language and ethnic identity have characterized ethnolinguistic ideologies as the deep structure of overt language practices. By contrast, this exploratory analysis argues for the advantages of shifting from a multi-level to a single-level explanatory model, consisting of interpretive frames and data (= aspects of sociocommunicative behavior) interpreted by way of those frames. The single-level model affords, arguably, a more unified treatment of people's everyday inferences about ethnolinguistic identity, on the one hand, and research paradigms for studying language as an ethnosemiotic resource, on the other hand. Yet the "single-tiered" model does not void socioideological considerations. Instead, it assumes that a continuum stretches between (1) entrenched language prejudices, (2) efforts to use language theory to question or dislodge such prejudices, and (3) the moment-by-moment hypotheses and inferences in terms of which humans make sense of their conspecifics' linguistic behavior, along with other ethnosemiotic cues.

### **1. Introduction**

In a recent discussion of ethnolinguistic identity *vis-à-vis* the development and current status of African American Vernacular English (AAVE), Walt Wolfram noted suggestively that although most of the world's languages are associated with ethnocultural groups, "language is neither a necessary nor [a] sufficient condition for ethnic group

membership"<sup>1</sup>. In other words, one need not align oneself with a subordinated language variety to experience prejudice or, for that matter, outright discrimination. Rather, what enables the dominant culture's exclusion or subordination of minority groups is a complex system of assumptions, norms, and practices, whose multifacetedness creates a sort of built-in redundancy and reduces the weight carried by any one component of the system. Encompassing various sources and types of information — from skin color and dress to religious practices and food choices — this framework organizes experience into subsystems of ethnosemiotic cues more or less accessible to conscious awareness, with language constituting just one of the subsystems at issue. Conversely, when isolated from the larger ecology of ethnosemiotic conventions, linguistic behaviors do not suffice to qualify those who instantiate them as members of particular groups. Hence the controversial status of white rappers who, like Eminem, incorporate elements of AAVE into their performance styles but do so at the risk of being viewed as re-appropriating or co-opting indigenous black culture — and thereby threatening to diminish the critical and oppositional energies from which it takes its distinctive character.

But if language is neither a requirement for nor a guarantee of ethnic identity, what then accounts for the pervasive and persistent tendency, on the part of sociolinguistic researchers as well as non-specialists, to associate language and ethnicity? Using Wolfram's and others' ideas as a springboard for my discussion, in this exploratory discussion I examine foundational issues facing theorists who study, from various disciplinary perspectives, the contingent and variable link between language and ethnic identity. Because of the complexity of the language-ethnicity nexus, analysts have sought to illuminate this nexus by synthesizing insights from a range of fields. Here I shall follow suit, bringing ideas from sociolinguistic theory into dialogue with models developed in cognitive linguistics and text processing, discourse analysis, evolutionary psychology, hermeneutic theories of

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<sup>1</sup> Wolfram, Walt. Linguistic subordination and ethnolinguistic identity: The construction of African American Vernacular English. Paper presented at a conference on "Contextualizing Ethnicity: Conversations across Disciplines" sponsored by NC State University's College of Humanities and Social Sciences and the Center for International Ethnicity Studies; Raleigh, USA, February 2003. Hereinafter referred to as Wolfram 2003.

interpretation, and cultural semiotics, among other disciplines. But though my account thus draws on concepts from multiple research traditions, my chief aim is to work toward an explanatory framework with maximal economy — that is, one that combines the greatest scope with the fewest underlying assumptions. In other words, I seek to maximize opportunities for cross-disciplinary exchange concerning the language-ethnicity link by sketching a framework for inquiry that is attached to a very spare and thus highly transportable conceptual scaffolding. To put the same point yet another way, sometimes thin rather than thick descriptions are needed (*contra* Geertz 1973), because the thicker the description of a process or phenomenon, the more embedded that description is in the specific analytic paradigm that provides the descriptive nomenclature. To promote new synergies among the fields concerned with how language shapes and is shaped by ethnic identity, it may be necessary to build a stripped-down model on which diverse traditions of inquiry can then re-converge, each thickening the basic account that provides a common foundation for cross-disciplinary work.

## **2. Language and ethnicity: From a multi-level to a single-level explanatory model**

The link between language practices and ethnocultural groups is both synchronically and, as recent accounts of the development of AAVE suggest (see Poplack, Tagliamonte 2001; Rickford 1999; Wolfram, Thomas 2002), diachronically variable. However, if there is one main lesson to be learned from the past 30–40 years of sociolinguistic research on language variation, it is that variability should not be confused with randomness. The linguistic code associated with English licenses alternative ways of saying the same thing — [ta:m] vs. [talm], *hoagie* vs. *sub*, *I ain't goin' nowhere* vs. *I am not going anywhere*, and *gimme a beer* vs. *would you please give me a beer?* Sociolinguists have appealed to social, situational, and sociopsychological factors — including regional background, gender, age, class, ethnicity, and degree of familiarity between interlocutors — to account for why particular selections are made from among semantically equivalent speech productions. Thus, in questioning the extent to which language and ethnicity can in fact be considered co-variant,

Wolfram (2003) revisits a basic sociolinguistic research hypothesis. His account suggests that the correlation in question cannot be explained without appeal to other, socioideological factors — factors that were outside the scope of the models originally developed by dialectologists and sociolinguists to study variety in language.<sup>2</sup>

From this perspective, the tendency to associate language and ethnicity can be viewed as parasitic on social processes situated at another, more fundamental explanatory level; those further processes determine how language varieties become socially embedded in the first place. As Wolfram (2003) puts it, “linguistic boundaries are permeable, constructed notions defined more adequately on the basis of sociopolitical and ideological considerations than on the basis of linguistic structures and sociolinguistic relationships”.<sup>3</sup> Hence, to account for observed interconnections between the linguistic and the social — interconnections that inform everyday communicative behavior as well as media portrayals and public debates like those

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<sup>2</sup> Drawing on the work of cultural theorists such as Bourdieu (1991) and Foucault (1980), analysts in fields such as applied linguistics, sociolinguistics, and linguistic anthropology have brought these socioideological factors within the purview of research on a range of topics. Topics explored from this perspective include nonstandard varieties of languages; metalinguistic or metapragmatic awareness on the part of language users, who categorize speech events as well as speakers using specific kinds of verbs for reported discourse (*he argued* versus *he speculated*), labels for members of groups (e.g., *redneck*, *college boy*), and other metapragmatic signalling strategies; the nature and distribution of ethnolinguistic boundaries within and across speech communities; the interrelations among language use and educational practices; and the gender-marking and -creating functions of linguistic forms deployed in more or less distinct communities of practice. Overviews of relevant work in these and other areas can be found in Schieffelin, Woolard, Kroskrity (1998) and Kroskrity (2000); Woolard (1998) provides an especially useful summary of trends and approaches. This research provides a background for the present analysis, which seeks to identify core processes underlying and thus linking all these (apparently heterogeneous) sociocommunicative phenomena. As I suggest below, those core processes involve the alignment or non-alignment of frames or typifications with specific sociocommunicative behaviors interpreted by way of those frames.

<sup>3</sup> Cf. Roberts (1998: 109–110): “Despite disciplinary differences, one of the most remarkable trends in current thinking about language and culture is a broad consensus on the *constructed* nature of social reality. Ideas about social relations, social identities, national and ethnic groups and institutions are understood as being formed out of interaction and out of the dominant and conflictual knowledge and assumptions that circulate within society”.



surrounding the Ebonics controversy — it is necessary to excavate another, deeper level of the social. The processes operating at that more fundamental level work to naturalize linguistic boundaries as markers of ethnocultural divisions, which are in turn reified as found, not made.

By contrast, in the remainder of this discussion, I wish to argue the merits of a framework for studying language and ethnicity that shifts from a multi-level to a single-level explanatory model. Instead of construing ethnolinguistic ideologies as the deep structure of language practices, I outline what I take to be a more minimalist model consisting of interpretive frames and data (= aspects of sociocommunicative practice) interpreted by way of those frames.<sup>4</sup> Occam's razor is not my only reason for proposing the alternative account; beyond this, the single-level model affords, in my view, a more unified treatment of people's everyday inferences about ethnolinguistic identity, on the one hand, and research paradigms for studying language as an ethnosemiotic resource, on the other hand. It also encompasses all levels of language organization, from phonetic to discourse-level features. By the same token, the "single-tiered" model does not void socioideological considerations from research on language and ethnicity. Instead, it assumes that a continuum stretches between (1) entrenched language prejudices resistant to modification in light of contravening data, (2) efforts to use language theory to question or dislodge such prejudices, and (3) the moment-by-moment hypotheses and inferences in terms of which humans make sense of

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<sup>4</sup> I use the term *frame* in parallel with what Artificial Intelligence researchers (Minsky 1975; Rumelhart 1981; Schank, Abelson 1977) sometimes refer to as *schemata*, i.e., "'structures of expectation' associated with situations, objects, people, and so on" (Tannen 1993a: 7). As characterized by researchers in fields including anthropology (Bateson 1954), sociology (Goffman 1974), and discourse and narrative analysis (Tannen 1993a, 1993b; Herman 2002: 85–113; Jahn 1997), frames allow previous experiences to be stored in the memory as structured repertoires of expectations about current and emergent experiences. In parallel with what Schutz (1962) characterized as typifications, or "normalized" representations based on more or less heterogenous instances of general processes (buying groceries, booting up a computer, engaging in classroom discourse, etc.), frames structuring sociocommunicative practice guide the production and interpretation of discourse until such time as linguistic, interactional, or other cues prompt the modification of a given frame or else its rejection in favor of some other emergent or competing frame.

their conspecifics' linguistic behavior, along with other ethnosemiotic cues.

In the single-tiered model, both language practices and research on those practices can be viewed as involving a more or less robust interplay between frame-driven or top-down and data-driven or bottom-up processing strategies; this interplay constitutes a version of what is known in other contexts as the hermeneutic circle, whereby understanding of the whole affects interpretation of the part and interpretation of the part in turn (re)shapes understanding of the whole (Bontekoe 1996). The frame-data nexus structures the relation between linguistic behaviors — accents, lexical choices, morpho-syntactic features, discourse-level phenomena — and inferences about those behaviors. To take a discourse-level example from face-to-face interaction, using a “joke” frame as opposed to an “insult” frame can lead to very different interpretations of one and the same utterance. Conversely, if enough utterances of a particular type arise during our interaction, I may have to shift from the theory that my interlocutor is just kidding to the theory that he or she really has it out for me. Likewise, at the level of vocabulary, depending on what sorts of lexical items accumulate over the course of an interaction (*soda* or *pop?* *bucket* or *pail?*), my initial theory about my interlocutor's regional background may have to give way to a different theory. More generally, as linguistic information accrues over the course of an interaction or for that matter an extended theoretical inquiry, the interpretive frames used to make sense of such data may need to be modified or else abandoned in favor of other, competing frames.

The same goes for working theories about an interlocutor's ethno-linguistic identity. Those who (as Wolfram 2003 reports) revealed their bias against African American callers seeking to rent apartments no doubt used a variety of linguistic cues to shift from a default, generic frame that did not commit them to any interpretation of a caller's ethnocultural status to a more nefariously particularized frame, which was both the rationale for and the result of discriminatory business practices. My point is not to excuse such practices, of course, but rather to situate them in the larger interpretive ecology from which they derive their internal structure as well as their pernicious effects. Arguably, engaging in the ongoing calibration of frames and data is a phylogenetic legacy — a species-general imperative arising from

evolutionary pressures, not a racist idiosyncrasy.<sup>5</sup> At issue are basic and general sociocognitive principles by virtue of which typifications based on prior experience are subsequently used as frames for interpreting and organizing thought and conduct (Schutz 1962). It is just that language prejudices involve the persistent use of invalid typifications, i.e., the perpetuation of frames manifestly at odds with the data for which they purportedly account. Linguistic behaviors *different* from those associated with the standard trigger an interpretive frame whereby the behaviors are construed as *inferior* to the standard. The root question posed by manifestations of language prejudice can thus be reformulated in the following terms: why, in some domains of language practice, do frames incongruent with accumulating data and blatantly controverted by linguistic theory nonetheless persist as ways of seeing, as structures for understanding the world?

Addressing this question requires recognizing that there is a difference in degree, not kind, between language prejudices and theory-building activities of a more positive and progressive sort. The bigot's self-fulfilling prophecy and the best intentions of learning through experience are separated by a razor's edge: namely, the nature of the interface between frames and data. This isomorphism explains, in part, the difficulty of using language theory to "cure" native biases about language practices, which constitute species of theory-building in their own right. Linguistic science is fundamentally continuous with folk-linguistic knowledge, given that the goal of researchers, too, is a goodness-of-fit between interpretive frames and linguistic data — as is attested, for example, by the ongoing debate among the Anglicist, Creolist, and Neo-Anglicist positions *vis-à-vis* the origin and development of African American Vernacular English, or AAVE (cf. Wolfram, Thomas 2002 for an overview; for a dissenting position, see Poplack, Tagliamonte 2001). Similarly, in his classic study of ways in which speakers more or less consciously manipulate cues associated with linguistic difference, what Labov (1972) characterized as

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<sup>5</sup> In this sense, study of the diachronic profile of the interface between typifications and language practices falls within the domain of evolutionary psychology, which explores evidence for the development of human intelligence at a species level and builds hypotheses concerning how current-day cognitive abilities are an outgrowth of that evolutionary legacy. Relevant studies include Barkow, Cosmides, Tooby (2002); Gazzaniga (1994); and Tomasello (2001).

indicators, markers, and stereotypes represent a point of convergence between linguistic theory and folk linguistics. In ethnolinguistic contexts, these categories can be taken to refer to classes of ethnosemiotic cues embedded in frames that are brought to bear, in a more or less default manner, on the cues' interpretation. At one end of the spectrum, indicators automatically trigger application of a frame. At the other end, stereotypes have already been reframed, in a sense, because once a cue becomes subject to overt commentary, those who comment on the cue are no longer in the grip of the frame by virtue of which it seemed transparently linked to an ethnocultural group. Stereotypes are thus frames made visible — i.e., brought within the scope of native ethnolinguistic theorizing.

### 3. Rejoining the circle

But the foregoing considerations only defer the question at hand: if language prejudices constitute (bad) theories in and of themselves, why do those theories persist in the face of better theories — theories revealing the systematicity of non-standard dialects, for instance, and thus the untenability of claims concerning the “inferiority” of vernacular speech? In this connection, note that although they are distinguished by the degree of automaticity involved in their manipulation and interpretation, all three categories of cues identified by Labov (1972) — indicators, markers, and stereotypes — fall within the metapragmatic domain, as characterized by Silverstein (1993; cf. Lucy 1993). This domain encompasses the competencies undergirding what Roberts (1998: 111) succinctly characterizes as “speakers’ capacity to comment on language use and give off signals about social relationships”. Besides linking language use and language theory, such metalinguistic competencies suggest how language prejudice can be situated within the broader ecology of human cognition, in which metacognition, or thinking about thinking (Moses, Baird 1999), can play a more or less prominent role — depending on factors that include the complexity of a given processing task and the availability of the cognitive resources needed to perform it. From this perspective, language prejudice needs to be investigated as the close kin of what cognitive scientists have termed *judgment heuristics* — that is, general “coping strategies” by virtue of which people arrive at determinations

based not on exact calculations but on heuristic guides, or rules of thumb. Heuristics of this sort, influentially explored by Tversky and Kahneman (1974; cf. also Kahneman, Slovic, Tversky 1982), enable people to determine rapidly the probability of rain or the size of a crowd on the street — though they also lead to systematic errors that researchers have technically defined as the *biases* attendant upon distinct kinds of judgment heuristics (see Fischhoff 1999). In essence, prejudice is a byproduct of the same kinds of quick-and-dirty heuristics, which may be put to non-pernicious as well as socially destructive uses — whenever an information-rich environment causes a processing overload and prompts the use of cognitive shortcuts. Given that humans' basic cognitive endowment has achieved relative stability at this point in our evolutionary history, it seems unlikely that people will ever stop using heuristics of this sort. The challenge, then, is to militate against their indiscriminate application across all contexts — in effect, to increase the range, diversity, and explanatory adequacy of the heuristics used to manage the informational richness of ethnosemiotic cues in particular.

We can come at this same issue from another direction — namely, by emphasizing the basic asymmetry between frames and data, typifications and the specific practices or behaviors on which they are based (and which they are in turn used to interpret). On the one hand, it is impossible to make sense of an isolated datum in the absence of a frame that allows it be chunked with other data and so made comprehensible as an element of some larger experiential structure.<sup>6</sup> But on the other hand, it is possible for frames to become so entrenched, taken-for-granted, or “naturalized” that the hermeneutic circle is interrupted and some newly interpreted part is prevented from impinging on what is in reality an always only emergent understanding of the whole. In this sense, language prejudices can be recharacterized as grossly and reprehensibly data-resistant or, at the limit, data-impervious frames. At issue are top-down processing strategies that, more or less widely shared within a social collectivity,

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<sup>6</sup> Thus, in the sociophonetic experiment conducted by Thomas and Reaser (2004), which aimed to determine which phonetic cues listeners use to identify a speaker's ethnicity, informants were (in effect) prompted to activate frames insofar as they were asked to make identifications in terms of pre-given ethnolinguistic categories. The design of the experiment itself, in other words, afforded frames for contextualizing the phonetic details under investigation.

resist being brought into a complementary relation with bottom-up strategies, as well as with other frames defined by their perviousness to data. The more naturalized or entrenched a frame, the less amenable it is to being modified or replaced — indeed, the less possible it is to discern features of the world that would warrant modifying or replacing the frame in question.

Given the data-resistant profile of language prejudices, how could such frames ever be denaturalized, that is to say, demonstrated to be contingent theoretical constructs rather than reflections of the way things really are? The only viable strategy for countering prejudice is arguably to propagate, as widely as possible, alternative frames more sensitive to the confirmatory as well as disconfirmatory pressure of data. Ideology is a way of describing what happens when the hermeneutic circle is broken; a preconceived whole is forcibly imposed on parts in an effort to homogenize the different, to eradicate the other in the name of the same. Paradoxically, then, only by refusing to step outside the circle of interpretation can interlocutors as well as analysts begin to open the closed system of language prejudice — and thus start coming to terms with diversity.

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### **Этнолингвистика и социальное познание: языковой предрассудок как герменевтическая патология**

Ученые, изучающие связь между языком и национальным идентитетом, описывали этнолингвистические идеологии как глубинные структуры первичных языковых практик. Настоящий анализ доказывает, что гораздо целесообразнее перейти от многоуровневой аналитической модели к одноуровневой модели, которая содержала бы в себе интерпретационные фреймы и данные (т.е. аспекты социокоммуникативного поведения), которые через эти фреймы интерпретируются. Одноуровневая модель, безусловно, позволяет более адекватно рассматривать, с одной стороны, ежедневные выводы людей об этнолингвистических идентитетах, а с другой — исследовательские парадигмы языка как этносемиотического ресурса. Кроме того, одноуровневый подход не свободен от социоидеологических влияний. Наоборот, такой подход предполагает, что простирается некий континуум между (1) языковыми предрассудками, (2) попытками использования теории языка для опровержения этих предрассудков и (3) спонтанными гипотезами и выводами, на основе которых люди осмысливают языковое поведение своих сотоварищей (наряду с другими этносемиотическими указаниями).

### **Etnolingvistika ja sotsiaalne taju: Keeleline eelarvamus kui hermeneutiline patoloogia**

Keele ja rahvusliku identiteedi vahelist seost uurinud teadlased on etnolingvistilisi ideoloogiaid kirjeldanud kui esmatasandi keelepraktikate süvastruktuuri. Käesolev analüüs aga väidab, et on märksa otstarbekam minna mitmetasandiliselt analüütiliselt mudelilt üle ühetasandilisele mudelile, mis koosneks tõlgenduslikust raamistikust ja andmetest (st sotsiokommunikatiivse käitumise aspektidest), mida antud raamide kaudu



tõlgendatakse. Väidan, et ühetasandiline mudel võimaldab oluliselt ühtlasemalt käsitleda inimeste igapäevaseid järeltusi etnolingvistiliste identiteetide kohta ühelt poolt ning keele kui etnosemiootilise varamu uurimisparadigmasid teiselt poolt. Siiski ei ole ühekihiline lähenemine puhas sotsioideoloogilistest kaalutlustest. Vastupidi, nimetatud lähenemine eeldab, et (1) juurdunud keelelised eelarvamused, (2) keeleteooria kasutamine nende eelarvamuste kummutamiseks ja (3) hetkelised hüpoteesid ning järeldused, mille pinnalt inimesed teevad järeldusi oma kaaslaste keelelise käitumise kohta (sh teised etnosemiootilised vihjed), moodustavad kõik ühe pideva kontiinumi.

## The relevance of C. S. Peirce for socio-semiotics

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**Abstract.** Neither Peirce's thought in general nor his semeiotic in particular would appear to be concerned with 'society' as it is generally conceived today. Moreover, Peirce rarely mentions 'society', preferring the term 'community', which his readers have often interpreted restrictively.

There are two essential points to be borne in mind. In the first place, the epithet 'social' refers here not to the object of thought, but to its production, its mode of action and its transmission and conservation. In the second place, the term 'community' is not restricted to the scientific community, as is sometimes supposed. On the contrary, it refers to the ideal form of a society, which he calls 'the unlimited community', i. e. a group of people striving towards a common goal.

Furthermore, Peirce's semeiotic has been put in doubt as capable of providing a model for communication, the basis of social, dialogic, thought and action. The aim of the present article is to show that semeiotic, funded as it is on Peirce's three categories, which define and delimit the ways in which man perceives and represents the phenomena, can provide a comprehensive model for the analysis of all types of communication in all social contexts.

Finally, in this domain, as in others, Peirce was a forerunner, with the result that his thought has often been misunderstood or forgotten. In addition, he was pre-eminently a philosopher, thus his work has been neglected in other disciplines. The elaboration of other triadic systems, such as, notably, that of Rossi-Landi, shows that the tendency of semiotics in general is to move away from the former static, dyadic model towards that involving a triadic *process*. This trend, with which Peircean theory is in harmony, has been sharply accentuated in recent years, but often lacks a philosophical justification for its assumptions, which Peirce provides.

## Introduction

In an article entitled *The Range of Peirce's Relevance*, Max Fisch enumerated the many domains in which Peirce's sign-theory has been of enduring influence, among them, not only semiotics, linguistics and anthropology but sociology (Fisch 1983). This last might appear surprising, as Peirce himself took a poor view of sociology as such and of sociologists in general. If he admitted the existence of "social sciences", such as "the natural history of religion, economics, political science" and the like (Ketner 1975–1987, 3: 229), he did not recognise sociology as such as a science because not founded on some general idea. His comments in review-articles in *The Nation* make this abundantly clear.

Furthermore, "society" is not a term often used by Peirce. Admittedly, for him, as for other pragmatists, all thought is "social", and he develops this point very frequently. But Peirce, unlike other pragmatists, especially Dewey, was not interested in social conditions or conflicts, and when he uses the term "society" it is not with the connotations of the term as used to-day, and certainly not those of its problematic nature. "The social nature of thought is an essential part of Peirce's evolutionist philosophy and enters into his definition of truth", wrote Philip P. Wiener; "unlike Dewey, however, Peirce scarcely deals with any specific social problem" (Wiener 1949: 20).

At the time Peirce was writing, sociology was still in its infancy, and socio-semiotics as it is understood nowadays, not even thought of. And references to Peirce in contemporary writings on socio-semiotics are extremely rare. What could it mean then to say that Peirce's semeiotic can have relevance for socio-semiotics? I think we can say that his thought, after the event, as it were, as in the case of sociology, may be seen to have this relevance precisely because it constitutes a coherent system not confined to any particular time or place.

A counter-example may be relevant here: Dewey's pedagogy was developed in Chicago and other industrial towns as a result of the conditions of unrest prevailing there at the time. However respectable Dewey's fundamental ideas may be deemed, the fact remains that when his system was later adopted in France, the result was catastrophic, the context being entirely different. One may object, with reason, that these ideas were imperfectly interpreted by French educationists, who did not perceive the philosophy underlying them,

and were merely looking for “recipes” (Deledalle 1996, 2: 90) but that fact is also part of the context, which was not ready to receive them.

This is not the case with Peirce, whose semeiotic is founded on a philosophical basis capable of transcending local or temporal material circumstances. If it remains true that Dewey and Peirce “both proposed the same methods of approaching problems, any problems [...], Peirce’s pragmatism was more theoretical, Dewey’s instrumentalism more practical” (Deledalle 1996, 2: 90). If it is also true that a philosophy also depends, to a certain extent on time and place, the domains in which it moves and has its influence will be different according to the problems it has to solve. The more general the nature of this philosophy, and the fewer the particular questions raised, the wider this potential relevance will be. Peirce’s pragmatism was indeed that of ideas. But ideas are applied to concrete situations, “the proof of the pudding is in the eating” and if Peirce’s thought helps to solve problems, the pragmatic answer may be to use it.

### **The social origin and nature of thought**

What exactly does it mean to say that for Peirce all thought is social? One may first remark that in expounding his semeiotic, Peirce habitually takes examples from our everyday life. I am not here alluding merely to weathercocks, flags and such-like, which he gives as examples of different types of sign, but to anecdotes and conversations in social contexts recognisable to the reader as corresponding to his own experience. The famous analysis of “What sort of day is it today?” (CP 8.314) explores the question of what a person is actually communicating, or trying to communicate, when he speaks, and the manner in which this is received by the interlocutor, in other words, everything which lies beyond a “signifier” and a “signified”. Likewise the passage on “the cook’s desire”, which analyses the idea of generality with reference to a common everyday event, (in this case the making of an apple pie; CP 1.341). “This example, although a simple one, is highly significant, for it can be taken as paradigmatic of Peirce’s concept of intelligence: the governing of behavior by appropriate general rules (or ‘habits’) in order to attain a desired end” (Limper 1996: 283–284), or the example of two men standing on the seashore, of whom one may descry a ship although the other cannot

see it, this situation bringing about a modification of the object of discourse (CP 2.232).

But, although this aspect of the question has been developed extensively in socio-linguistics (notably by M. A. K. Halliday, who claimed, curiously, in 1985 that “dynamic models of semiotic systems are not yet very well developed”<sup>1</sup>) this is a comparatively minor point in attempting to explain what Peirce really means by “social”. More fundamental is his exposition of scientific method, where he explains himself quite clearly: the fact that the method of modern science “has been made social” (CP 7.87) is a vital factor. He says:

On the one hand, what a scientific man recognizes as a fact of science must be something open to anybody to observe, provided he fulfils the necessary conditions, external and internal. As long as only one man has been able to see a marking upon the planet Venus, it is not an established fact. (CP 7.87)

In other words the validity of facts or ideas must rest on public proof of them, as Dewey was never tired of remarking.

“On the other hand, the method of modern science is social in respect to the solidarity of its efforts”, and here Peirce compares the scientific world to a “colony of insects, in that the individual strives to produce that which he himself cannot hope to enjoy. [...] When a problem comes before the scientific world, a hundred men immediately set all their energies to work upon it” (CP 7.87). For “man is not whole as long as he is single, [...] he is essentially a possible member of society. [...] It is not ‘my’ experience, but ‘our’ experience that has to be thought of; and this ‘us’ has indefinite possibilities” (CP 5.402, n2).

This notion of “indefinite possibilities” is essential, and Peirce develops it elsewhere in the domain of logic. “All human affairs rest upon probabilities, and the same thing is true everywhere” (CP 2.653). But man is mortal, Peirce goes on, and

death makes the number of our risks, of our inferences, finite, and so makes their mean result uncertain. The very idea of probability and of reasoning rests on the assumption that this number is infinitely great. [...] logicity inexorably requires that our interests shall *not* be limited. They must not stop at our own fate, but must embrace the whole community. This community, again, must not be limited, but must extend to all races of beings with whom

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<sup>1</sup> Quoted by Scott Simpkins (1998: 511).

we can come into immediate or mediate intellectual relation. It must reach, however vaguely, beyond this geological epoch, beyond all bounds. He who would not sacrifice his own soul to save the world, is, as it seems to me, illogical in all his inferences, collectively. Logic is rooted in the social principle. (CP 2.654)

and elsewhere, “the social principle is rooted intrinsically in logic” (W 2.270–1). This solidarity of society (extended, be it noted in passing, “to all races”) is not thus, for Peirce, some vague well-intentioned humanitarian principle but a *logical necessity*.

A logical necessity, but also a psychological and intellectual one, for in reasoning, says Peirce

one is obliged to *think to oneself*. In order to recognize what is needful for doing this it is necessary to recognize, first of all, what “oneself” is. One is not twice in precisely the same mental state. One is *virtually* [...] a somewhat different person, to whom one’s present thought has to be communicated. Consequently, one has to express one’s thought so that that virtually other person may understand it. (CP 7.103; CSP’s italics)

In other words, in order to think, we need others, and if they are absent we have to imagine them. “No mind can take one step without the aid of other minds” (CP 2.220) and in fact “[...] the man’s circle of society (however widely or narrowly this phrase be understood), is a sort of loosely compacted person, in some respects of higher rank than the person of an individual organism” (CP 5.421). Thus society and the individual are indissolubly bound together. “The non-social individual is an abstraction arrived at by imagining what man would be if all his human qualities were taken away”, as Dewey said (Dewey 1967–1972 [1888], 1: 232). The idea that all thought is a dialogic process is not new, but as Fisch remarks “There are no more pervasive themes in Peirce’s work, from early until late, that all thought is in signs and is dialogic in nature” (Fisch 1986: 442), and Peirce develops this idea in more precise contexts.

Consequently, all knowledge is social in origin. The impossibility for an individual of arriving at any ‘truth’ or ‘reality’ is one of Peirce’s most constant themes. In one of his review articles he says that “to say that a broad philosophical conception is altogether new, is almost equivalent to a condemnation of it. That anybody has given it its definitive form can hardly ever be said” (Ketner 1975–1987, 3: 170).

### Society and community

Why then, does Peirce so seldom refer to 'society'? He prefers in general the term 'community'. In view of this preference, it is somewhat amusing to find James M. Baldwin himself stating in his *Dictionary* that this word is used "loosely", and that "no technical use of this term is recommended" (Baldwin 1953, 1: 200–201). In a review article on a work by Baldwin, Peirce regrets with the author that there exists no theory of the *socius*, which is "the weakness of current sociology" (Ketner 1975–1987, 2: 111).

It has also sometimes been remarked that the term, for Peirce, usually refers to the "community of inquirers", or the "scientific community", which, understood in a restricted sense, leaves Peirce open to the charge of elitism which is sometimes made, and which might appear to disqualify him as a universal thinker. If it is true that in general he does use the term in this restricted sense, this is perhaps not so heinous as it may appear. For there is (*pace* Baldwin) a significant difference between the terms 'society' and 'community'. The former term designates an association, a gathering of people living in the same geographical locality, bound by a government, a common system of laws, whereas 'community' implies some common link or interest binding a group together, which transcends physical proximity and legal or political conventions. A 'society' is not necessarily otherwise united: on the contrary, class-divisions and conflicting interests may prove to be a source of social problems, which physical proximity may actually exacerbate.

In effect, different communities may exist within a society, whereas there can hardly be different societies within a community, which is more closely-knit, bound together as it is by shared norms and values. In a word, the cohesion of a society is imposed from the outside, however 'democratically' (or not), whereas that of a community emanates naturally and dynamically from a group striving *towards a common goal*. So far, and superficially, the charge of elitism might seem to be somewhat justified.

But in actual fact, far from opposing the two notions, Peirce expands this notion of 'community' to the ideal of what a society *should* be, i.e. the 'unlimited community' (Goudge 1969: 261, 290, 305). This community "may be wider than man", indeed it may include "all living beings" (W 2.271) (which, with his inclusion of

protoplasm (CP 1. 351) also perhaps foreshadows the possibility of bio- and zoo-semiotics). And it is also unlimited in time. The conception of reality “essentially involves the notion of a COMMUNITY, without definite limits, and capable of an indefinite increase of knowledge” (W 2.239 CSP’s capitals). That, in actual fact, and in our daily lives, ‘society’ is usually conflictual, is not Peirce’s problem, but this is not in contradiction with the fact that all thought is social, for the epithet applies to the way in which thought is produced and elaborated, the mode of its action and the means of its conservation.

### Communication

How does this link up with socio-semiotics?

If one accepts the idea that man cannot think by himself, and that thought is a collective process, this necessarily implies communication, and communication can take place only through signs. A sign cannot exist *in vacuo*; if it is not perceived by somebody as a sign, it cannot be a sign. Any branch of semiotics concerning man is therefore inevitably social. The term ‘socio-semiotics’ is almost a redundancy if we did not know, by ‘collateral experience’ what sense to give it.

There are many semiotic models, and the semeiotic of Peirce has recently been put in doubt as a model for a general theory of communication, a point to which we will return. However this may be, Peirce’s triadic model has a great advantage. In the first place, it is not merely a *model*, it is part of a *system*. Models can usually be modified at will, sometimes to suit a particular case, whereas in a coherent system, if an element is modified this implies either that this modification will be an aberration, or alternatively that if it is found to be genuinely justified, then the whole system will have to be modified and re-thought in virtue of some other general principle.

The system on which his semeiotic is based is his phaneroscopy, which provides us with three categories for apprehending the phenomena, Firstness (possibility, spontaneity, feeling), Secondness, (action and reaction, experience) and Thirdness (law, thought, mediation, habit). Peirce here did a useful work, appreciated by philosophers but not always by semioticians. In a recent article, Mats Bergman maintains that



the study of Peirce's semeiotic has reached a point where certain central findings, such as the triadic character of the sign and its reliance on Peirce's categories of *Firstness*, *Secondness*, and *Thirdness*, have been established firmly enough to speak of an interpretive consensus. (Bergman 2000: 227)

This may be the case for philosophers studying semiotics, but it is doubtful if for the semioticians who are not philosophers all the implications of Peirce's theory, especially in what concerns the hierarchy of categories, esteemed by Gérard Deledalle (2000) as being of crucial importance, are very obvious. Indeed, some semioticians think his system is needlessly complicated, whereas in fact it is simpler precisely because it reduces the number of categories to the fundamental ones by which man perceives the world and represents it. His sign-system is thus also triadic. Peirce's inestimable contribution to sign-theory is the presence of the Interpretant, which pertains to mediation, and thus to Thirdness, *within the sign-process*. In a dualistic theory of signification the Object corresponds to the Sign. In actual fact everybody knows this is not true. The immediately perceived sign, linguistic or other, (the Representamen) will invariably necessitate a complement of information before it can approach to an adequate 'meaning'. The latter, moreover, will not be fixed and stable, but will continue to evolve with each successive semiosis.

This is not news even to dualists. They have all encountered the problem and attempted to solve it in different ways. 'Contexts' and 'codes' abound, but they are often simply convenient adjuncts to fundamentally dualistic systems where they have no official status. In other words, Thirdness is always with us, but unrecognised as such.

But Thirdness cannot be reduced to a dyadic system, there is no place for it. What pertains to thirdness will remain *outside* a semiotic process in a dualistic system, thus it can be modified at will. Gérard Deledalle (1978: 27–49; 2000: 100–113), for pedagogical reasons, attempted to formulate Peirce's sign in Saussurean terms and proved it to be an impossible task. And it is not advisable, from the point of view of the ethics of terminology to use the terms 'signifier' and 'signified' and to appropriate the term 'interpretant' as a useful adjunct in a basically dualistic process of communication and interpretation as is sometimes done. If one is evoking the interpretant, one is at the same time referring to Peirce's whole system, which, ideally, would have to be accepted in all its coherence. Peirce's semiotic cannot be dissociated from the philosophy and the logic which are its

foundations. This said, his position on 'chance' and 'fallibilism' must not be forgotten.

It can thus be argued that this phaneroscopia is relevant for socio-semiotics precisely because it accounts clearly for the multiple and different ways in which man perceives and expresses the world in which he lives, moves and has his being.

## Can semiotics provide a model for communication?

### 1. Contra

Semiotics in general however has been put in doubt as capable of supplying a model for communication, and we shall here deal briefly with some of the objections formulated.

The 'post-semiotic' view of John Stewart (1995) is that semiotics cannot be applied to other domains because of "its symbol model basis, which assumes 'language is fundamentally a system of signs or symbols'" and that the "most prominent stumbling-block is a two-world orientation that posits 'a fundamental distinction between [...] the world of the sign and the signifier, symbol and symbolised, name and named, word and thought'" on the grounds that "'world is the *single* coherent sphere that humans inhabit'" (Simpkins 1998: 509). While being valid with reference to a dyadic semiotics these remarks can obviously not be applied to Peirce's triadic semeiotic, and in actual fact, no Peircean would object to this objection!

But other objections, paradoxically, are voiced by some of those who advocate the extension of the field of semiotics towards other domains, notably the social. R. Hodge and G. Kress (1988) insist on the necessity in the latter domain of a *diachronic* dimension, while also, just as paradoxically, condemning "semiosis [...] as 'necessarily ideological'" (Simpkins 1998: 510). It is hardly necessary to point out, on one hand, that 'semiosis' in Peircean semeiotic is *by definition* a diachronic process, and on the other hand, that, although Peircean semiosis does not and cannot ignore ideology, the latter must be taken account of only as constituting a field of interpretants, which can in no way command or govern the semiotic process itself. The only way of invalidating the statement I have just made would be for semeiotic to deconstruct itself by advancing the notion that it is itself based on an

ideology, however I think this sort of 'Cretan paradox' can hardly be maintained.

Although these authors claim to be taking into account "all sign systems" (Simpkins 1998: 510), that of Peirce has obviously been neglected. This kind of objection to semiotics in general as being unable to provide a model for communication is obviously irrelevant here.

More serious are the philosophical arguments set forth by Mats Bergman in the afore-mentioned article, with reference to works by Habermas (1995) and Parmentier (1985; 1994). Bergman does concede at the outset that

it is uncertain whether his scattered remarks on the topic entail a consistent theory of communicative phenomena, one may even question whether semeiotic can plausibly be developed in this direction at all. Peirce's most formal account of the sign relation, given in strictly unpsychologistic terms, without reference to human utterers and interpreters, indicate that pure semeiotic is after all only concerned with the abstract conditions of representation and truth, and that communication is a non-philosophical problem-area that is best left to the special sciences. (Bergman 2000: 226)

Playing the devil's advocate, Bergman exposes the point of view of those who maintain that the utility of semeiotic is restricted to "truth-functional epistemology and mathematical logic, and thus renders Peirce's theory of signs practically useless for other types of inquiry, such as studies of culture and social communication" (Bergman 2000: 226).

Having duly nourished Cerberus, Bergman then proceeds to undermine these statements, with reference to the work of Johansen (1985; 1993), Colapietro (1996) and Liszka (1996) showing that it is the definitions of those who make them that "restrict" the scope of semeiotic. It is not our intention here to make a detailed analysis of Bergman's lucid and thoroughly-documented article, but to stress several points made which have relevance for our present topic.

The main point is that the pragmatistic dimension, "the domain of habits and practices" (Bergman 2000: 237) of semeiotic cannot be ignored. Moreover, he says, if one cannot maintain that Peirce's model be a perfect model for communication, it must not be forgotten that the idea of perfect communication is itself perhaps illusory, "communication is not a straightforward transmission of truth" (Bergman 2000: 238), which would be a dyadic process, he remarks

(and, we would add, would entail interminable discussions about the nature of this ‘truth’, and the philosophical assumptions underlying it). He stresses the fact that although “Peirce undeniably characterizes his theory of signs as a scientific undertaking [...] that does not mean that semeiotic would study nothing but science” (Bergman 2000: 247). He reminds readers of a fundamental point we made at the beginning of this article, that although Peirce’s *most formal* accounts of the sign relation concern the theoretical science of rhetoric, Peirce, in spite of his anti-psychologism indicates that “it is acceptable to take some psychological facts into consideration”, adding that “we could perhaps broaden its scope further by allowing a limited number of sociological insights to enter the proceedings”, for “Peirce tends to view practically anything that can in any sense be investigated in semiotic terms” and “inquiry is a social mode of conduct” (*ibid.*, my italics).

## 2. Pro

If it is true that the occurrences of Peirce’s use of the *term* ‘communication’ are rare, as Bergman and others point out, this does not mean that it is not, in fact, a *subject* continually treated, albeit indirectly, in his writings. In fact, contrary to the assertions quoted above, examples of communicative processes in concrete situations are to be found dispersed everywhere in his writings, as already noted, even in apparently abstract philosophical discourse, showing that Peirce never loses sight of the fact that man is pre-eminently a sign, living in a “universe [...] perfused with signs” (CP 5.448 Fn P1). Semiosis does not take place in a philosophical stratosphere:

Propositions refer to the real universe, and usually to the nearer environment. Thus, if somebody rushes into the room and says, “There is a great fire!” we know he is talking about the neighbourhood and not about the world of the *Arabian Nights’ Entertainments*. (CP 2.357).

Or again, when defining ‘Predication’: when we say ‘it rains’, “it does not mean that it rains in fairyland” (CP 2.360).

In the present writer’s opinion, Bergman’s article most effectively disposes of any objections of a philosophical nature that could be made to using Peirce’s semeiotic as a model for a system of communication or its extension to other fields of social activity. That

Bergman advances his arguments with some caution, and without mentioning Peirce's many references to the context of the everyday world is a fact, but this caution (I feel) is only a 'sign' conveying the usual reluctance of certain philosophers to admit that their theories might have 'effects' or 'practical bearings' on the world in which we live. Not being a professional philosopher, I feel myself entitled to go a little further.

In actual fact, researchers have not waited for a philosophical justification. Peirce's thought has already been used *systematically* in recent years by Dinda Gorlée (1994; 2004) in the field of translation, by Irene Portis-Winner in anthropology (2002), by David Scott and others in visual semiotics and also in architecture by Claudio Guerri, not to mention the analysis of literary texts. 'Communication' is not restricted to some specialised field of inquiry. All human activities can be the subjects of communication, and most of them can be considered themselves as forms of communication. So the multiplication of fields of interpretants requires that any statement, be it linguistic, artistic, sociological, psychological or other, about the human situation must be examined with the minutest care, in order to assess the import of the signs which constitute it. It would appear, at least to the present writer, that this can be effected only by a sign-system taking account of the different ways in which the world is apprehended. Peirce, using Ockham's razor, supplied us with the essential categories necessary for doing this.

With the advance of the twentieth century, sign-systems reposing on a dualistic basis had obviously fallen into disrepute, giving 'semiotics' in general a bad name. As noted previously, thirdness is essential; some important, but relatively modern social concepts, such as that of 'alterity' are based on it (Deledalle 1991; Net 1994; Deledalle-Rhodes 1994a; 1997) Other sign-systems have been elaborated, some of these recognising the importance of Peircean thought. And many semioticians refer to Peirce as one of the 'founding fathers' of semiotics. Unfortunately, even though this is true, as Ketner and Kloesel (1975: 404) pointed out "some of them have hardly scratched the surface in understanding his work". One of the reasons for this is, as previously noted, that Peirce "never published one single, special, and comprehensive work on semiotic and that comments and reflections which might be regarded as useful to modern semiotics are found throughout his published articles"

(Ketner, Kloesel 1975: 400). Another reason is that "some scholars present Peirce's work in terms of various compartments: his metaphysics, cosmology, pragmatism, ethics, semiotic, logic, mathematics, and so on" (Ketner, Kloesel 1975: 397). This may sometimes appear useful for purposes of exposition, the authors admit, but for semiotic they suggest that "this kind of approach [...] is neither fruitful nor appropriate"; for "semiotic (or logic in the broad sense) which is his omnipresent epistemology, permeates his whole scholarly output" and "when Peirce turns to consider any of the sciences other than semiotic, the consideration is undertaken using the epistemological or philosophical approach that semiotic provides" (Ketner, Kloesel 1975: 397). The authors thus conclude that "present-day students of semiotic should properly be conversant with all his philosophical work, not merely with what they consider to be a relatively restricted part which they identify as relevant to semiotics" (Ketner, Kloesel 1975: 398).

In publishing *Charles S. Peirce: Ecrits sur le signe* (Deledalle 1978), which is not, as is sometimes thought a work written by Peirce, but a selection of the most relevant of Peirce's articles arranged logically and accompanied by commentaries and explanations, and *Théorie et pratique du signe* (Deledalle 1979), Gérard Deledalle did a great deal to remedy this situation in France and francophone countries, and by founding IRSCE at the University of Perpignan in 1974 enabled scholars to study not only Peirce's semeiotic, but the philosophy on which it is based. Furthermore, IRSCE became a centre for international conferences, assembling Peircean specialists of different origins, mainly from Italy, Germany and the United States and South America, whose work is so well-known that it would be out of place to dwell on it here.

However, these international conferences, at which all aspects of semiotics were exposed and discussed, were not devoted exclusively to Peirce, but recognised the relevance and importance of other triadic systems, often based on Morris, as well as those stemming from the Prague school and, in some sense, parallel to Peircean semeiotic, but not in opposition to it. That of Ferruccio Rossi-Landi, which is, according to Jeff Bernard "a genuine socio-semiotics" (Bernard 1992: 1639) would appear indeed to be almost complementary to Peirce's sign-theory. This theory was exposed notably by Jeff Bernard in his paper read at the 4th Congress of IASS at Perpignan in 1989, and in

1992, Gloria Withalm, invited lecturer at IRSCE devoted her seminar to the subject. Both found an appreciative audience.

The diagrammatic representation of this system (Bernard 1992: 1640) is a pyramid, consisting of a cluster of triads, representing the semiosis of sign-production. Bernard insists, and this is important for Peircean semioticians, that

this is *not* a model from the structuralist-functionalist kind [...] but in itself already a *compositum mixtum* of many empirical and theoretic origins [...] moreover, one should not forget that we have to deal here, factually, in a reductionist way with *processes*, i.e. with concrete persons in their historicity. (Bernard 1992: 1641)

The final diagram, which accounts for further exploration and application of this theory (Bernard 1992: 1646) shows a series of inter-connecting and related triads. These diagrams call to mind the triangle usually employed to represent Peirce's triadic concept of semiosis, but they are obviously far more complex, and concern a domain not specifically treated by Peirce. That Rossi-Landi initiated his system with reference to a different field of interpretants is not so important as it might first appear. Similar semiotic analyses are the result. The essential point for a comparativist semiotician is the triadicity, the dynamism and the continuity of this system. Gérard Deledalle always insisted that the triangle, necessary in a first stage for pedagogical reasons, should not be taken to mean that a semiosis is limited. He, like Lady Welby, instead of a "vicious circle" would have preferred the diagram of an open-ended "virtuous spiral" (Welby 1983 [1903]: 37–38), representing the continuity of the process of signification, but for practical reasons this is far more complicated to reproduce.

## Conclusion

At the present time, it is obvious that the static, dyadic model based on a dualistic world-view has been found unsatisfactory and is dying a natural death. After the event, even Saussure, held to be responsible for the diagram of a sign that perpetuated a dyadic model, subsequently adopted in many other semiotic fields, has been re-read and interpreted in a totally different perspective, as exposed by Simon Bouquet (1997). My only point in writing this necessarily incomplete

essay is to underline the comprehensive, dynamic and coherent nature of Peirce's system, elaborated unfortunately *before* the development of socio-semiotics, with the result that it has often been forgotten, misunderstood, or simply ignored. Peirce's thought is too often regarded by non-philosophers as a complex and complicated system of abstractions having no relation to social facts and realities. Peirce himself would have been the first to deny this. For the pragmatist, ideas and theories are not mere playthings for philosophers, but *tools* to be used for solving real problems. This is nowhere more evident than in his article on "Theory" in which he analyses the distinction made between 'theory' and 'practice', pointing out that on one hand no theory can embrace all the facts and on the other hand that all practice has a theory behind it, concluding as follows:

Perceptual judgments, [...] are, for the purpose of logical criticism, absolute facts without any admixture of theory. If a theory does not square with perceptual facts it must be changed. But the impressions of sense from which it is supposed that the percepts have been constructed are matters of theory. If the percepts were proved not to square with the impressions of sense, it would not at all be the percepts that would have to be reformed; it would be, on the contrary, that theory, that the percepts are constructed out of the impressions of sense, that would have to be modified. (Peirce 1953 [1901]: 693–694)

Far from being an abstract system removed from reality, Peirce's thought, with its social origin, pragmatic dimension and its adaptability to all types of situations and experiences would seem to recommend it on the contrary as a potential tool of great interest for sociosemioticians.

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### **Значение Ч. С. Пирса для социосемиотики**

Ни общая философия Ч. С. Пирса, ни его специфически семиотическая часть на первый взгляд не касаются «общества» (*society*) в современном значении этого понятия. Более того, сам Пирс редко пользуется термином «общество», предпочитая термин «сообщество» (*community*), трактуемое многими его читателями довольно узко.

Следует запомнить два положения. Во-первых, эпитет «социальный» указывает тут не на объект мышления, а на результат, механизм, передачу и сохранение мыслительной работы. Во-вторых, «сообщество» не ограничивается сообществом ученых, как часто думают. Наоборот, «сообщество» указывает на идеальное общество, которое Пирс называет «ограниченным сообществом», т.е. на группу людей, которые стремятся к общей цели.

Более того, часто сомневались и в том, может ли семиотика Пирса предложить нам модель коммуникации. Цель настоящей статьи — показать, что основываясь на трех категориях Пирса, которые определяют и разграничивают модусы перцепции и презентации разных явлений, семиотика может дать всеобъемлющую модель для анализа всех типов коммуникации во всех социальных контекстах.

Наконец, Пирс был первопроходцем в данной области (как и во многих других), что означает, что многие его идеи позабыты или неправильно поняты. К тому же он был прежде всего философом и поэтому другие дисциплины отвергали его работы. Возникновение иных триадических систем (напр Ф. Росси-Ланди) указывает на общую тенденцию семиотики отдалиться от статической диадической модели и повернуться к моделям, содержащим триадический процесс. Это направление, которое соотносится с пирсовской теорией, проявляется особенно ярко именно в последние годы, но, к сожалению, зачастую без философского обоснования своих предпосылок, имеющих у Пирса.

### C. S. Peirce'i tähtsus sotsiosemiotika jaoks

Ei Charles Peirce'i üldine filosoofia ega ka selle spetsiifiliselt semiootiline osa ei näi esmapilgul puudutavat "ühiskonda", nii nagu seda mõistet tänapäeval üldiselt tõlgendatakse. Veelgi enam, Peirce mainib "ühiskonda" (*society*) harva, eelistades mõistet "kogukond" (*community*), millele paljud tema lugejad on andnud üsna piiratud tähenduse.

Olulised on kaks tõsiasja. Esiteks ei viita epiteet "sotsiaalne" siin mitte mõtlemise objektile, vaid mõttetöö tulemile, toimimismehhanismile, edastamisele ja säilitamisele. Teiseks ei piirdu mõiste "kogukond" käesolevas mitte teadlaste kogukonnaga, nagu vahel arvama kiputakse. Vastupidi, "kogukond" viitab ideaalsele ühikonnale, mida Peirce nimetab "piirituks kogukonnaks", st grupele inimestele, kes püüdlevad ühiste eesmärkide poole.

Veelgi enam, tihti on kaheldud selles, kas Peirce'i semiootika suudab pakkuda kommunikatsiooni — sotsiaalse, dialoogilise mõtlemise ning toimimise aluse — mudelit. Käesoleva artikli eesmärgiks on näidata, et põhinedes Peirce'i kolmele kategooriale, mis määratlevad ja piiritlevad erinevate nähtuste tajumise ja esitamise mooduseid, suudab semiootika pakkuda välja kõikehõlmava mudeli igat tüüpi kommunikatsiooni analüüsimiseks kõigis sotsiaalsetes kontekstides.

Lõpeks oli Peirce antud valdkonnas (nagu paljudes teisteski) pioneer, mis tähendab, et tema ideed on tihti unustatud või valesti mõistetud. Peale selle oli ta ennekõike filosoof ja seetõttu on teised distsipliinid tema tööd eiranud. Teiste triaadiliste süsteemide tekkimine (nt F. Rossi-Landi) osutab semiootika üldisele tendentsile eemalduda staatilisest diaadilisest mudelist ja pöörduda triaadilist protsessi sisaldavate mudelite poole. See suundumus, mis on kooskõlas Peirce'i teooriaga, on just viimastel aastatel teravalt esile kerkinud, kuid kahjuks puudub tal tihti filosoofiline põhjendus oma eeldustele, mis Peirce'il on olemas.

## The construction of the 'we'-category: Political rhetoric in Soviet Estonia from June 1940 to July 1941

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**Abstract.** The article asks, how one of the basic notions of cultural-political identity — *we* — is constructed in mass media, *viz.* which kind of semiotic and linguistic facilities are used in constructing a political unity. The approach used in this article is based on Lotman's semiotic theory of culture and on the analysis of pronouns in political texts, using Emil Benvenist's theory of deixis. Our case study concentrates on the years 1940–1941 which mark one of the most crucial periods in Estonian nearest history. The source material of the analysis consists of speeches of new political elite in power, all of which were published in major daily newspapers at the time. In outline, first year of soviet power in Estonia can be divided in two periods. First period would be from June 21 to "July elections" in 1940. In political rhetoric, new political elite tried to create a monolithic subject, the unity between themselves and people (*people's will*) by emphasizing activity and freedom of self-determination. Nevertheless, starting from "elections", especially from the period after "accepting" Soviet Republic of Estonia as a full member of Soviet Union, a transition of *we*-concept from an active subject to mere passive recipient can be detected. From that time on, *people's will* was envisaged as entirely determined by marxist-leninist ideology and "the Party".

The occupation of Estonia by the Soviet Union in June 1940 had a shocking effect on Estonian people. The former meanings that had constructed society and were crucial to human understanding were turned into being something with a minus sign and substituted with

the Soviet ideological worldview.<sup>1</sup> The following article analyses, therefore, how the ideology supporting the events of the 1940s found expression in the speeches of the new men of power. Among other things the analysis might be deemed interesting due to the fact that ideological construction of political reality is one of the constituting factors of human identity.

Defining 'ideology' has turned to a sort of glass bead game among scientists. Thus the well known author of several textbooks on political science Andrew Heywood defines ideology as a system of beliefs, the truth or falsity of which cannot be "proved in any scientific sense", but which nonetheless helps to structure our understanding of the world (Heywood 1990: 2). In the framework of this article I consider necessary to delimit ideology as a programmatic and rhetorical application of a grand philosophical system which agitates people to political action and can provide strategic guidelines for such activity (Hagopian 1978). Accordingly, ideology functions as a justification of political power, as a factor mobilizing the people and creates a mental order in the customary disorder of political life, providing the "ground principles"<sup>2</sup> so to speak, by which the ideology perceives the surrounding world. Since politics had the subordinating role *par excellence* according to the self-reflection of the Soviet ideology, the political identity had also to shape the socio-cultural identity of human beings.

The concrete object of study is the category of *we*. Semantically the keywords used in the framework of this article are the ones established in the political rhetoric such as *the will of the people, the people* etc., i. e. these referring to on whose behalf it is being spoken in politics.

The analyzed material is composed of the largest daily newspapers *Päevaleht* (issues from 1938, 1939 and 1940) and *Rahva Hääl* (issues

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<sup>1</sup> The determining factors of the public ideological discourse in the pre-War Republic of Estonia (1918–1940) were the valuing of fatherland and family, the participation in patriotic unions, the celebration of national anniversaries. The sacral status was ascribed to the ancient time and Lembitu, Päts and Jakobson, Laidoner and the war of independence, patriotic poetry and folklore, which all together shaped the essence of the national whole.

<sup>2</sup> "The Marxist-Leninist theory is the science of societal development, the science of workers' movement, the science of proletarian revolution, the science of building the communist society" (*The History of the Union-wide Communist (bolshevist) Party: A Crash-Course* — Lühikursus 1951 [1938]: 321).

from 1940 to 1941).<sup>3</sup> The essential part of the sources is formed of speeches of the politicians published in the press and of the editorials of the daily newspapers. Choosing media as the empirical object of study can be justified mainly by the fact that the media (especially the editions that cover daily news) reflects the worldview, ideology and value-orientations of a community (Lauk, Maimik 1998: 80).

### 1. The two dimensions of the *we*-category

As indicated above the political discourse is in this article approached mainly through the speeches of politicians. For many scientists the verbal communication is the most important constituent of discourse (Dijk 1998). The importance of political rhetoric is also expressed in the fact that it is through that that the *official* political position and intellectual framework is fixed — a framework that is the basis not only for describing and cognizing the surrounding world but also for *altering* it (Hertzler 1965: 3–4).

The discourse analysis approach emphasizes that the discourses are inseparable from power — their impersonal all-encompassing power to construct reality, but also the power exercised by subjects in (re)producing meanings.

The notion of “discourse”, as developed in some contemporary approaches to political analysis, has its distant roots in what can be called the transcendental turn in modern philosophy — i. e. a type of analysis primarily addressed not to *facts* but to their *conditions of possibility*. (Laclau 1993: 431)

At the same time this relationship between power and discourse should not be understood in the traditional framework for conceptualizing power and politics in which power is seen in terms of legal means (and ontologically as an “object” or “thing”) to protect private property in the name of public good (the liberal tradition from John Locke to John Rawls). The relationship between power and politics has also been described in terms of economic competition for votes in order to gain power (Joseph Shumpeter) and politics has been

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<sup>3</sup> After the coup in 1940 the newspaper *Päevaleht* was closed down. The newspaper *Rahva Hää* [literally *People's Voice*] that was founded in June 1940 instead of newspaper *Uus Eesti* [literally *New Estonia*] formed one of the main official voices of the Communist Party of Estonia.

connected with interactions governed by public ethical *norms* (Jürgen Habermas). These approaches however leave unanswered the main question: how is a power relation established?

The focus of studying political power moves away from the sovereign forms of power like state or administrative apparatuses and the hitherto systematically concealed forms of power enter the center of attention in the social sciences. In this framework politics can be conceptualised as “a practice of creation, reproduction and transformation of social relations” (Laclau, Mouffe 1985: 153) that can always be seen as an expression of the powers of discourse. One of the possibilities for constructing a power relation is through the use of deictics.

It is true that the tradition of describing deixis has a long history reaching back to the Stoics. But since Karl Bühler's *Sprachtheorie* (1934) the deixis has a well-established place in scientific linguistic studies. The deixis analysis has also extended its theoretical basis: devices for analysis have been borrowed from analytic philosophy (e. g., Kripke 1990; Evans 1985, etc.), semiotics (e. g., Greimas, Courtes 1993 [1978]) as well as from cognitive science (e.g., Lyons 1977; Fillmore 1982; Brown, Yule 1983). While other elements of language in political discourse have attracted attention well enough<sup>4</sup> the role of deixis in constructing power relations has largely been underestimated (cf. Weintraub 1989). The following could be regarded as a small contribution to filling that gap by using a concrete empirical material.

The deixis, as is well known, encodes in the utterances the person of the speaker, his/her subjectivity and spatiotemporal context and it is formed of corresponding orientational vocabulary and grammatical means. The deixis's rules of use enable the addressee to decode the utterance according to its context and to determine the extra-linguistic factors eliciting the content.

In the case of *we* the *I* and *you* form a unified subject that at a certain phase of the speech feels, thinks, speaks and acts unitedly but can be changed again latter — expanded, disintegrated, generalized or replaced. But, as Émile Benveniste explains the *we* is a very special kind of union that is based on the non-equivalence of the members: the *we* does not consist in a mechanical aggregation of different *I*-s but in the *we* there is always a dominant *I* (the subject of the utterance) and this *I* due to its transcendence subjects to itself a *not-I* which

<sup>4</sup> E. g., metaphor (see Lakoff 1992; 1996); lexis (see Lasswell *et al.* 1949, etc).

means that only through stepping out of itself it creates that *we* and thus determines the *not-I* (Benveniste 1966: 236–237). There are few words that are so ideologically and socially charged as the pronoun *we*. Through speaker's emphases the social relations, statuses, power and ideology are expressed through it and the addressee manipulated (Dijk 1998: 201–203). By analyzing the use of the personal pronouns in the political discourse (like the *we* in the speeches of the politicians) it is possible to study the rhetoric mechanism by which the membership of the in-group signified, the distancing it from its out-group or is marked, and the denigration of the out-group, the activism or passivity of the social agents and many other functions of the speech. It would be even more apt to say that the speaker constructs, creates the *subject* present in the utterance, the one on whose behalf he/she speaks.

Conceived this way the subject's characteristics can be expanded to larger imaginary communitarian wholes. Thus for instance the social classes are subjects, whose unity is constituted by interests that are determined by their position in the relations of production. Similarly a nation is an integral subject that is united by an identity based on language, culture, religion, history or other factors. The concept of *we (us)* that is accompanied by an opposition with *them* can be considered semiotically as the main characteristic of culture. Therefore, this opposition determines and delimits the type of the relation between culture's self-description (organized space) and other culture (unorganized space). Hence for every culture corresponds a type of its "chaos" that is not necessarily homogenous and always identical with itself but consist in an active human creation as the domain of the cultural organization (Ivanov *et al.* 1998: 33)

According to Juri Lotman the national-cultural specificity is at the primary stage grasped by outlanders (Lotman 1999: 45). Thus it is understandable that for instance at the ideational bearers of the first phase of the Estonian national awakening were mainly intellectuals of German origin.<sup>5</sup> We have here rather a question: who are they

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<sup>5</sup> The "national awakening" is a stipulative term coined in the Estonian historical literature in the first decades of the 20th century. It refers to the period when against the background of economic and social change in the second half of the 19th century the acknowledgement of nationality began in the Estonian literary communication and the awakening of the national self-consciousness and national movement started to emerge.



(Estonians as a social group that has not yet uniformly determined identity) that are not us (Germans as a nation with full-fledged identity). At the next phase when a culture that had thus far been only an object of description, reaches at the level of self-description, it takes “an exterior viewpoint towards itself and describes itself as unique” (Lotman 1999: 46). Estonians are counted in the so-called “nations without history”. Therefore the first ideologies of Estonianism relied on ethnic traditions and folkloric myths. In constructing the national narrative and history the experiences of other nations were followed and linked with ideas popular at the time (Annus 2000: 89). A special role in the shaping of the spiritual life (as for all of the Eastern-European small nations) was played by the ideas of Johan Gottfried Herder (Undusk 1995: 581). A positive and integral self-identification thus answers to the question: who are we? And through simultaneously opposing itself to the *other* — the *not-we* (for example to other nations) — the nation or class at the same time identifies itself negatively: we are not what are the others. At this phase an ideology is formed in which the self is conceived as sovereign.

The concept of the subject correlates to that of the object. The drive to self-organization depends on the mode of the relations in society. The mode of these relations determines whether the human being cognizes itself as the subject or object of the creation of culture. In this article the word *we* in addition to its meaning as a deictic pronoun refers exactly to such a category defined as a unified whole.

Two aspects of the *we*-category will be focused in the analysis:

- (1) How it was constructed as a subject-object relation in the Soviet propaganda.
  - (a) During the span from the “coup of June” to the July “elections”.<sup>6</sup>
  - (b) The period from July 1940 to the German occupation in July 1941.
- (2) How was the “*we*” positioned deictically in texts?

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<sup>6</sup> In July 14–15 1940, general elections of the State’s Council were held which was a spectacle conducted according to the directives from Moscow. The clique that had carried on the “Coup of June” aggregated around the electoral block of Estonia’s Working People’s Union (EWPU), who, having the position of power, cancelled out any nomination of candidates from the opposition. As a result the EWPU got 92.8% of votes from the “election”.

## 2. Historical introduction

June 1940 Estonia, Latvia and Lithuania were occupied by the Soviet troops. In the public-political discourse it was presented as the institution of the power of the people. In August the 6th Estonian Republic was incorporated into the Soviet Union, which, in turn, was called "joining the USSR on voluntary basis".

In actuality, the Soviet Union had already on the 23rd of August 1939 entered into pact with the German *Reich*, the secret protocols of which established the Baltic States as part of the Soviet's sphere of influence. In September the same year the Soviet Union began to realize its aggressive foreign politics. On the 28th of September in Moscow under the pressure of the Soviet Union the contract of mutual aid was signed with Estonia, by the terms of which Estonia had to allow the building of the military basis of the Red Army to Saaremaa, Hiiumaa and Paldiski. In the early summer of 1940, when the whole world's attention was focused on the successful action of Wehrmacht in France, the Soviet government decided to realize conclusively the agreements of the secret protocols of the Hitler–Stalin pact. On the 16th of June 1940 the Soviet Union delivered an ultimatum to Estonia, accusing Estonia of military cooperation with Latvia and Lithuania, which supposedly threatened the national security of the Soviet Union. A response to the ultimatum which stipulated the establishment of a new government and a free access to the additional military forces of the Soviet Union was to be given on the same day. In case of refusal the units of the Red Army were to move to Estonia by force. The government of Estonia, considering the political situation of that day Europe, decided to accept the terms of the ultimatum and on 17th to 18th of June the Soviet troops occupied the Republic of Estonia. On the demands of Moscow, a new and clearly Soviet-oriented government was appointed, the head of which became Johannes Vares-Barbarus. The Coup of June was accomplished.

## 2.1. The deictic constitution of the *we*-category in the speeches of the politicians

Johannes Vares-Barbarus begins his first speech in the 25th of June issue of the *Rahva Hää* as follows:<sup>7</sup>

A Miracle has happened — *we*<sup>8</sup> have won. *Our* day of victory has become the day of freedom. *We* all are patriots and love country and people. (Vares-Barbarus 1940a)

Here a question arises: whom does Vares-Barbarus mean by *we*? Should the addressee of the communication be distinguished from that *we* on whose behalf it was spoken? And what do the words “*we all*” mean in the last sentence? The speech by Vares-Barbarus allows to claim that at first by the “*we all*” it was meant a part of a whole. Further in his speech Vares-Barbarus stresses the conclusiveness of the events of June the 22nd but adds that even

the most magnanimous of wills and human capacities have limits, *we* already have done more but to gain even more it takes organized work and pains, therefore my hope is on the assistance of *all* the citizens. (Vares-Barbarus 1940a)

Hence it is clear that the *we* of the addresser does not indicate speaking on behalf of the whole people because the last part of the sentence (“the assistance of *all* the citizens”) allows conceiving people as something external. The *we* of the addressee and the *we* of the speaker (the speaker and the other communists on whose behalf it was spoken) exist separately in this speech. This separation is also detectable in the pre-election speech of Hans Kruus on the July 10th issue of the *Rahva Hää*:<sup>9</sup>

All the votes to Estonia’s Working People’s Union. No votes to the adversaries of *our* demands and platforms. [...] Every human being possessing even

<sup>7</sup> Johannes Vares-Barbarus was the prime minister of the “people’s government” (the Moscow-minded government) since June 1940. After the incorporation of the Republic of Estonia to the Soviet Union in August 1940 Vares-Barbarus became the chairman of the Presidium of the Supreme Council of the Estonian SSR.

<sup>8</sup> Here and hereafter all the italics are added by me — *A. V.*

<sup>9</sup> Hans Kruus was the minister of education and the deputy of the prime minister of the “people’s government”.

the least of attentiveness and knowledge has been able to witness the great changes that have taken place in *our* state and social life after the June 21st. (Kruus 1940a)<sup>10</sup>

The gap between the addresser and the addressee of the speech is still to be overcome. The intra-textual opposition between the parties of the communication disappears during the period following the "election". Vares-Barbarus confirms in a speech on July the 15th after the triumphant "electoral" victory (92.8% of votes to EWPU):

My esteemed fellow strugglers and comrades! Chinese walls of different kinds have been torn down between *us* [meie]. Torn down is the wall between *us* and the Soviet peoples.<sup>11</sup> Secondly that Chinese wall between the people and the ruler collapsed with the accompanying cheers of the working people and without the Jericho horns. [...] *No* force can hold *us* back from giving hand to each other for *common* struggle for freedom. There is no step backward. The die is cast! (Vares-Barbarus 1940b)

In the second sentence Barbarus specifies the position of the *we*-category through its belonging to a larger semantic whole — the so-called "family of the Soviet peoples". From the point of view of the interior unity the most important aspect is the disappearance of the gap between the ruler and the people in the third sentence. A unified subject is created in the utterance. The speaker identifies the public or people with itself or as Benveniste would put it: the *I* subjects the *non-I* so that both now belong semantically to the same grammatical and semantic whole. At the same time the grandness of the break is emphasized by the figure of the Chinese wall and the attitude towards the preceding period as something conclusively past and overcome is marked by the deictic *that*.

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<sup>10</sup> In Estonian there is certain ambivalence in the word "*meie*" in this quotation that has some rhetorical charge: it means both the normal meaning "*our*" and grammatically it could also mean the more technical construction "*of the we*" where "*we*" is seen as a subject not merely a demonstrative pronoun. The grammatical reason for this is that the nominative and the possessive case for the word "*meie*" (*we*) are identical.

<sup>11</sup> Here again the rhetorical charge derives from the grammatical peculiarities of Estonian language: the phrase can semantically be read both as "between *us* and the Soviet peoples" as well as "between the *we* and the Soviet peoples".

## 2.2. The formation of the subjectivity of the *we*-category in the speeches by the politicians

The period from the coup of June to the election in July can be seen as the first phase of the formation of the subjectivity of the *we*-category. During that period a transition took place from the addresser-addressee opposition (expressed in the separation between them) to their unity, i.e. the speakers (local communists) spoke on behalf of both themselves and the spoken-to. In the first speech by Vares-Barbarus the subject is above all the *we* of the speaker, i.e. the local communists who had carried out the coup. In addition it implies ascribing activism and causality. Those who were addressed were passive receivers. They did not have their own face yet in the framework of the new ideological paradigm, in other words their identity (as a certain system of meanings) was “out of joint”. But in the following speeches there is a traceable development towards eliminating the opposition between addresser and the addressee and the elaboration of soviet identity unifying both counterparts. The speaker turns into an anonymous medium at the expression of the will of the people. In the speeches a category of *we* (*the people*) was constructed that was simultaneously the speaker and the spoken-to and that expressed the will of itself: “the real *will of the people* has emerged in the elections” (Säre 1940a).<sup>12</sup>

## 3. The changes in the *we*-category from the July “election” in 1940 to July 1941

On July 14–15, an “election” was held according to the directives from Moscow in order to “legitimate” the soviet coup in Estonia. After the July “election” the nascent State’s Council decided to change the name of the Republic of Estonia into Estonian Soviet Socialist Republic and to submit an application for ESSR’s accession to the Soviet Union. On the 6th of August 1940 in Moscow the Supreme Council of the Soviet Union decided to fulfill the request of the Estonian SSR. The annexation in accordance with the scenario of Moscow had been accomplished completely.

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<sup>12</sup> Karl Säre was the first Secretary of the Central Committee of the Estonian Communist Party in 1940–1941.

In what follows I will analyze the ways in which the construction of the *we*-category in the speeches of the statesmen was altered in the new situation after the parliament elections. The afore presented speech by Vares-Barbarus on the July 15 (Vares-Barbarus 1940b) could be held as a communicational turning point in the parties' formation of the *we*-category. For the first time in any statesman's speech we can witness the greetings addressed to the Red Army, the Communist Party of the Soviet Union and their representatives — Stalin for most of the occasions.<sup>13</sup> The canonical sequence of greetings, so to speak, can for the first time be detected at the end of the speech by Estonian Communist Party's representative Karl Säre on the July 16 issue of the *Rahva Hääl* :

Long live the friendship between Estonia and the powerful Soviet Union; Long live the heroic and undefeatable Red Army; Long live the tried out leader for the Estonian proletariat and for the entire working people: the Estonian Communist Party; Long live our teacher, friend and leader, the great Stalin! (Säre 1940a)

The purpose of the obligatory greeting addresses is not to contact or enter a dialogue with the immediate audience of the addresser, but the communication with the "third" party. According to Mikhail Bakhtin there is a third party in every dialogue who does not formally participate in the process, but in relation to whom the real communicants order their positions: for instance: God's judgment, the eye of history, consciousness etc. (Bakhtin 1979: 149–150). In the Soviet situation the third party is formed of the Communist Party headed by Stalin. In the analyzed actual situations of communication between the local statesmen and the public, Stalin as a third party concealed in the text becomes the real addressee of the message. It is precisely the latter in relation to whom the addresser may not be in error when building up the discourse. The speeches passed a strict Moscow-minded censorship through which even the least of deviations from the speech canon approved by Moscow were eliminated. If we consider the tradition of Estonian political rhetoric that had preceded the Soviet Occupation it can be said that the speeches suffered a pragmatic deficiency for the local audience. Of no small importance in this connection is the fact

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<sup>13</sup> In the first issue of the *Rahva Hääl* (June 22, 1940) there was a coverage of the people's reaction that found its expression in a "powerful hurricane of greetings to the Red Army, to comrades Stalin, Molotov, Vorošilov, Timošenko!"

that there was no activeness on the proper-name level among the local party board.

Functionally the greetings had a role of constituting the hierarchical, centralized structure characteristic to the soviet ideology. In view of this feature the whole spiritual culture is describable as a pyramid<sup>14</sup> on whose top lie the politico-ideological values. As Lenin have said: “We have now become an organized party, and that means creating the power, turning the authority of ideas into the authority of power, the subjugation of the lower instances of the party to the higher ones” (Lenin 1946: 339). And this alters significantly the deictic use of the *we*-category. The changes that had taken place in the speeches of the politicians did not involve exclusively the formal greetings directed to the “third party”. In a speech by Vares-Barbarus on the 1st of August the unity of the *we*-category is first emphasized:

*We* shattered the old retrograde regime. We declared the land the property of the people, we declared the industry nationalized to end the exploitation of the human being by a human being. From now on the workers, the peasants and the working intelligentsia are the plenipotentiary masters of the land. (Vares-Barbarus 1940c)

The increasingly battleful emphasizing of the coup sets the former power (that has been overcome at the *now*-point) as one that is old and retrograde behind the back of the *we*-subject on the linear time axis, at the same time indicating the inhumanity of old regime (the end of the exploitation of the human being). The structural form characteristic to the Soviet ideology is filled with the purely ideological content — the power of the proletariat, the nationalization, the end of exploitation. And in the last sentence the result of the activeness of the *we* is presented. But it is important to notice that in here this activeness determines the whole causal chain of the events. The *now*-deictic signifying the substitution of power is like a zero-point marking the beginning of time, from which the position of the subject

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<sup>14</sup> This centralized hierarchy did not show itself not only in the authority of the central party over the local ones but was also expressed in the entire sociocultural environment. Thus Kaginski identifies as the main characteristic of the soviet space the strict structurality and the dependence of that structure on the vertical, hierarchical and power-related dominants (Kaginski 2001: 157). A sharp hierarchy among nations showed itself in the speeches of the politicians after the famous toast in honor of the Russian people by Stalin after the Second World War.

is defined. In fact it means the positioning of the *we* to an entirely new notion of time and history. Having their starting point in the German romanticism and Herderian conception of culture in which the idea of history had become the idea of the nation and its historically unique self-fulfillment or an idea of national culture is what distinguishes the Estonian notion of history from that of the Marxist one. In the Marxist social theory the culture is reduced to the superstructure of the economic formation and is dependent on the latter. The development of the economic formation and hence the development of history depends on the dialectic of the development of the mode of production constituting the social organization. Such determinism however refers to a world history or general history which cancels out the independence of someone's *own* history, so to speak. The modification is clearly present in the speech by the first secretary of the Central Committee of the Estonian Communist Party K. Säre who explicitly refers to the Stalinist constitution as a great sign-post in the *world history*:<sup>15</sup> "the III five-year plan in which the *world-historical* mission will be accomplished: the transition from socialism to communism" (Säre 1940b). But in the subsequent speech by Vares-Barbarus the integral and active *we*-category moves into a new position:

*We* have an enormous work ahead of us that has already been done by *you*. [...] Under the *sun* of the Stalinist constitution *we bring* the country to prosperity<sup>16</sup>. [...] *Our sun* rises from the east now, the west remains behind our back as a cardinal point from which nothing rises. (Vares-Barbarus 1940c)

In the first sentence the *we*-category is opposed by a new case of second person plural — *you*. And at the same time changes the position of the *we*-category in relation to the political reality pictured in the text. A hierarchy forms among the agents presented in the utterance — a hierarchy in which the speaking *we* (a unitary „people“ created by the Estonian politicians) is underneath the speech and the enormosity of *our* "undone work" and the indication to the deficiency of the speaking subject (the Estonian nation) increases the

<sup>15</sup> In a special study on this issue the author has never observed any attempt in the speeches by politicians of the Estonian Republic to connect the Estonians to the world history and messianic world-cognition.

<sup>16</sup> The tying of the Stalinist constitution with the symbol of the sun as a life enabling source found its expression also in the coat of arms of the Soviet Estonia (*Rahva Hääl*, October 10, 1940).



power position of the *you*-category even more. The spatial and verb-deictics (*behind, rise*) define the *we*-category's socio-cultural belonging to the *locus* of the East (the Soviet Russia). The *we*-category that had previously signified the unity between the addresser and the addressee and had become an active subject (Vares-Barbarus 1940b) loses in this speech its sovereignty and also its subjectivity. The possibility of the *we* is based on and justified by an other — in the given speech by the sun of the Stalinist constitution. I shall add some other examples of the transformation of the *we*-category in the speeches from the active subject to object. Hans Kruus says in his speech on the 9th of August 1940: "The Stalinist constitution gives an irrefutable basis and firm framework" (Kruus 1940b). By the Stalinist constitution it is meant here a principle enabling the "right" being and at the same time the constituting condition for reality. That is corroborated by the successive utterance of Kruus: "The Stalin's constitution shall be a document that testifies that what is accomplished in the USSR can also be accomplished completely in other countries." And finally: "*We* have no doubt that the *new order* will bring principled and actual growth of and unprecedented human dignity".<sup>17</sup> Basically the same point is made by Säre in his speech on the anniversary of the Great Socialist October Revolution on the 5th of November 1940:

Through self-denying struggle the Russian proletariat has gained the place of the *people's leader*. [...] The proletariat is led by the brave and farseeing bolshevist party [...] as has been said by comrade Stalin [...] and all this is corroborated by clear facts. (Säre 1940b)

Although the conclusiveness of the coup of June is apparent in the earlier speeches by Vares-Barbarus and other party figures, the previously described period of the formation of the *we*-category is concentrated on the abolishment and "destruction" of the old regime. Thus the activity is meant rather as a negative activeness.<sup>18</sup>

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<sup>17</sup> I add here a quotation from a brochure characterizing the Soviet Estonia (Sovetskaja Estonija): "The heroic warriors of the Red Army were not just seen as the representatives of the big and friendly Soviet Union by the Estonian people but also as the bearers of a higher socialist culture, representatives of the new order" (Jefimov 1940: 43).

<sup>18</sup> Jaan Undusk has observed similar tendencies in the history writing discourse of the Soviet Estonia, characterizing the ways Estonians were pictured as a "only

The cognition enabling the new reality arrives at the speeches only after the "joining" the Soviet Union and is connected to the party's subordinating role towards the possibilities of cognition. The activity of the *we* is reduced now to the receiving and mediating of the objectifying activity of the new subject of the speech — the party or rather Stalin. The transition from the activeness to passivity, from the unconditioned to the conditioned takes place. Thus the *we* that had previously attained its unity in the utterance loses its independence, turning into an object for the party, and especially for Stalin to whom exclusively the position to be a subject was reserved in the public Soviet political discourse at that time. Stalin was the one who gave meaning to the *we* or "the soviet people" in the speeches. Behind this there was of course a simple *Realpolitik*: from the "soviet people" were excluded those who disagreed with the politics of Stalin. The Stalinist slogan "Cadres will decide everything" and the accompanying "self-criticism of the party" are actually one of the ideological concealments of this "game of exclusion". Thus it can be said that the "soviet people" created by Stalin was identical to the "we" that was created by his "I". In consequence it can be said that the soviet ideology resembles to the cultural type (if we understand in this context ideology as synonymous to culture) that was characterized by Lotman as an aggregation of texts that opposes to cultural type that creates the aggregation of texts (Lotman, Uspenski 1994: 245). In this cultural type the content of the culture is pre-given from the standpoint of the self-understanding of this culture; it consists of prescriptive sum of the "right" texts: in the Soviet ideology they were formed of the works of the Marxist-Leninist classics and in the Stalinist era mostly the works of Stalin himself.<sup>19</sup> In such a cultural type the subject of the speech as a creator of the reality (content) in the utterance has only relative value. Everything new is actually predictable and known to the knowers — the real subjects (Marx, Engels, Lenin, Stalin). Paraphrasing Benveniste it could be said that the *I*

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then" and "already at that time" syndromes that characterized Estonians as hopelessly behindhand and suppressed compared to Russians (Undusk 2003: 53–54).

<sup>19</sup> In fact the chrestomatic canonization of Marx's and Lenin's works depended on Stalin's concrete needs and it was not uniform and invariable (Vaiskopf 2002).

subjected the non-I completely or the I created the we completely according to its arbitrary will.<sup>20, 21</sup>

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<sup>20</sup> In a strictly hierarhized society the Party was not a unified subject either despite its being sometimes presented as one in texts. The Party was led by Stalin, God's (Lenin's) vicar on earth who exclusively possessed an I.

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### **Конструирование категории «мы»: советская политическая риторика в Эстонии с июня 1940 до июля 1941**

Одним из поворотных пунктов в новой истории Эстонии были 1940–1941 гг. В статье автор ищет ответ на вопрос: каким образом было сконструировано в публичных СМИ понятие «мы» — одна из основных категорий культурно-политического идентитета. В качестве источников используются речи политической элиты (Варес-Барбарус, Лауристин, Круус и мн. др.), опубликованных в основных газетах того времени. Начальное время советской власти в Эстонии можно разделить на два периода: первый условно датируется с 21 июня до «июльских выборов» в 1940 году, когда в политической риторике стремились к созданию единого монолитного субъекта и единство народа и власти описывали в категориях активности, творчества и свободы. Но начиная с «приема» Эстонской Советской Республики в Советский Союз 6 августа 1940 года в самоописании «мы» произошел существенный сдвиг. Местный «народ» был отодвинут на роль пассивного получателя, его подчинили марксистско-ленинской идеологии, диктату и воле Сталина и его партии. Для этого были использованы разные риторические средства — дейктики, пассивные формы глагола и т.п.

### **“Meie” kategooria konstrueerimine: nõukogude poliitiline retoorika Eestis juunist 1940 kuni juulini 1941**

Aastad 1940–1941 märgivad üht pöördelisemat perioodi Eesti lähiajaloo. Artiklis otsib autor vastust küsimusele: kuidas kultuurilis-poliitilise identiteedi üks põhikategooriaid “meie” konstrueeriti avalikus meedias. Uuritakse, milliseid semiootilisi vahendeid kasutati niisuguse poliitilise ühtsuse konstrueerimisel tekstides. Käesolevas artiklis lähenetakse püstitatud ülesandele Lotmani kultuurisemiootikast lähtuvalt ja asesõnade analüüsi kaudu. Analüüsi allikmaterjalidena kasutatakse poliitilise eliidi (Vares-Barbarus, Lauristin, Kruus jpt.) kõnesid, mis avaldati peamistes toleaegsetes meediaväljaannetes. Nõukogude võimu algusaega Eestis

võib jagada kaheks perioodiks. Esimest perioodi võiks tinglikult dateerida 21. juunist kuni “juulivalimisteni” 1940. aastal, kus poliitilises retoorikas üritati luua ühtne monoliitne subjekt ning ühtsust võimu ja rahva vahel kirjeldati kõnedes aktiivsuse, loovuse ja vabaduse kategooriates. Kuid alates Eesti Nõukogude Vabariigi “vastuvõtmisest” Nõukogude Liitu 6. augustil 1940. aastal toimus “meie” enesekirjelduses oluline nihe. Kohalik “rahvas” oli kõnedes taandatud passiivse vastuvõtja rolli, kus ta allutati marksistlik-leninlik ideoloogiale, Stalini ja tema Partei diktaadile ja taatele. Selleks kasutati erinevaid retoorilisi (deiktikud, tegusõnade passiivsed vormid jne) ja semiootilisi vahendeid.

## **Towards an integrated methodology of ecosemiotics: The concept of nature-text**

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**Abstract.** The aim of the article is to elaborate ecosemiotics towards practical methodology of analysis. For that, the article first discusses the relation between meaning and context seen as a possibility for an ecological view immanent in semiotics. Then various perspectives in ecosemiotics are analyzed by describing biological and cultural ecosemiotics and critically reading the ecosemiotic works of W. Nöth and K. Kull. Emphasizes is laid on the need to integrate these approaches so that the resulting synthesis would both take into account the semioticity of nature itself as well as allow analyzing the depiction of nature in the written texts. To this end, a model of nature-text is introduced. This relates two parties intertwined by meaning-relations — the written text and the natural environment. In support of the concept of nature-text, the article discusses the Tartu–Moscow semioticians' concepts of text, which are regarded as broad enough to accommodate the semiotic activity and environment creation of other animals besides humans. In the final section the concept of nature-text is used to describe nature writing as an appreciation of an alien semiotic sphere and to elucidate the nature writing's marginality, explaining it with the need to interpret two different types of texts.

For understanding the paradigm of ecosemiotics and its methodological possibilities it would be useful to start with a wider perspective and to consider possible relations and similarities between semiotics and ecology. The development of ecology as a discipline and the proliferation of semiotics in the mid-twentieth century can both be seen as expressions of the same wave of systemic thinking in

twentieth century science. Also cybernetics, general systems theory, and a large part of structuralism belong to the academic movement that draws attention to the structure and behavior of systems, and distinctions, influences, interrelations, and equilibriums in these. Ecology as a scientific discipline has remained faithful to the research objects and methodologies of natural sciences but has later itself had various ramifications for humanities, for instance for environmental psychology, ecocriticism, green studies, cultural ecology and environmental aesthetics, which have also shaped the intellectual atmosphere for semiotic studies.

Besides this general relatedness in development, some inner similarities between semiotics and ecology can also be found. Although semiotics has mostly focused on human sign activities and ecology has typically studied the life of other biological organisms, both are largely disciplines of relation, accustomed to consider their objects as relational or in relations with other objects and phenomena. They both consider such relatedness to be fundamentally important. In ecology the focus is on relations between organisms and their environment or on relations between different biological species. In semiotics the classical concept of sign itself expresses a certain type of relation: a sign "is something which stands to somebody for something in some respect or capacity" (CP 2.228). There is also intuitive resemblance between Peirce's idea of unlimited semiosis as series of successive interpretations (CP 2.228; 1.339), and recurrent processes in nature: change of generations, food chains and substance cycling as understood in ecology. A beautiful connection from ecological relations in nature to semiotic processes in language is established by W. John Coletta using Peircean notions of *metaindex* and *metaicon* (Coletta 1993). Similarly Peter Grzybek develops a semiotic view on human epistemogenesis where homologous spheres of human self (microcosm) and nature (macrocosm) become mediated and reflected by the sphere where culture and nature mingle (mesocosm) (Grzybek 1994). Connections between semiotic and ecological processes can be elaborated quite far, as it is done for instance by Roland Posner, who introduces the concept of *semiotic pollution*, as noise or disturbance that interferes "with sign-processes as much as material pollution interferes with the fundamental processes of life" (Posner 2000: 290). Posner considers the factors of communicative processes (sender,



recipient, context, channel, etc.) to be “semiotic resources” (Posner 2000: 294–296).

The question about ecosemiotics as a possible semiotic paradigm was raised by Winfried Nöth and his colleagues in the journal *Zeitschrift für Semiotik* a little more than a decade ago. Although this initiative was followed by some discussion, there is no reason to talk about ecosemiotics as a full discipline with wide research activities and an institutional establishment.<sup>1</sup> Compared to the discipline of biosemiotics, which also gained ground in the 1990s, but which has led to the establishment of an international society, regular publication of a thematic journal, and to regular conferences, ecosemiotics remains quite clearly in the background. The present article is written with the understanding that the ecosemiotic paradigm has a lot of unused potential. In the following pages I examine the different paths to ecosemiotics and try thereafter to formulate some methodological grounds and tools for studying texts that represent nature. Although the primary focus is on nature writing (understood as including essays and other non-fictional texts written about the natural environment (Maran, Tüür 2001; Tüür, Maran 2005), the proposed approach should also be usable for the analysis of other cultural texts, where nature is an important topic.

### **Contextualism as a common ground for semiotics and ecology**

An interesting semiotic concept regarding relations to ecology is *context*, which can be understood as “the circumstances that form the setting for an event, statement, or idea, and in terms of which it can be fully understood and asserted” (Pearsall 1998: 396). In ecology, a quite similar role has been given to the concept of environment as “the surroundings or conditions in which a person, animal, or plant lives and operates” (Pearsall 1998: 617), and which also have influence upon it (Lawrence 1989: 163). The concept of context has many forms and uses in semiotics. For instance in the semiotics of communication the contextual thinking may appear as an idea that the meaning of the

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<sup>1</sup> The largest collections of ecosemiotic studies published so far are probably thematic issues of journals *Zeitschrift für Semiotik* 15(1/2), 1993, *Zeitschrift für Semiotik* 18(1), 1996, and *Sign Systems Studies* 29(1), 2001.

message transmitted in communication is directed outside of the communicative situation and toward the context. Marks of such an approach can be found already from Karl Bühler's organon model of language communication, which distinguishes expressive function directed to the sender, appealing function directed to the receiver, and representative function that is directed to circumstances, objects or to the surrounding world (Bühler 1934: 34–37). Also the classical communication model of Roman Jakobson asserts the relation between meaning and context by claiming that the referential function of communication is directed to the context (Jakobson 1981: 21).<sup>2</sup>

The question of context and its influence on semiotic processes has in different forms been essential to many distinguished scholars who have been active in the border areas of semiotics. One of the best-known contextualists, British language philosopher I. A. Richards stresses the relevance of context in the determination of linguistic meaning. He writes:

The effect of a word varies with the other words among which it is placed. What would be highly ambiguous by itself becomes definite in a suitable context. So it is throughout; the effect of any element depends upon the other elements present with it. (Richards 1938: 178–179)<sup>3</sup>

From another angle Eugene Nida has emphasized the importance of context in translation processes. According to his views, meanings of the words and texts can only be communicated in relation to specific culture, and in this process, context has the essential role. To describe the effect of context on the text, Nida distinguishes different types of contexts such as syntagmatic and paradigmatic context, context

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<sup>2</sup> According to Jakobson, context must be either verbal or capable of being verbalized, i.e. accessible to the receiver. Although Jakobson's referential function should rather be understood through the indexicality, in the sense that communication itself distinguishes its context by referring to it, the openness of the communicative situation toward the surrounding world is still relevant regarding the possible ecological potential of semiotics.

<sup>3</sup> A similar position is represented by a semiotician of the younger generation – Yair Neuman, who, based on the works of Valentin Voloshinov, describes communication as a recursive and hierarchical system that cannot be efficiently understood just by the descriptions of the syntactic forms of representation: “as far as natural language is concerned, the context of the whole utterance determines the meaning of the components and vice versa in hermeneutic circularity” (Neuman 2003: 52).

involving cultural values, context of a source text, etc. (Nida 2001: 29–41).<sup>4</sup>

Contextual thinking has also served as a basis for the works of interdisciplinary scholar Gregory Bateson: “all communication necessitates context, [...] without context, there is no meaning” (Bateson 1980: 18). Contextual information may introduce redundancy to the communicational system, but there may well also exist several contexts, contexts inside contexts for the given message. Bateson’s understanding is also a relevant point for his Double Bind theory, which describes the condition where contexts of different levels are in contradiction for some recurrent communication thus bringing along a schizophrenic situation, where the participant does not have the possibility to give the correct response nor any way out of the situation (Bateson 2000: 206–207, 245). In relation to biological evolution Bateson has also written about the environment as context, which evolves as a response to animal activities (Bateson 2000: 155). Bateson has been rather critical toward the Darwinian understanding of a single individual or lineage as a unit of survival and has argued that the evolutionary unit should be a flexible organism-in-its-environment (which is comparable with the connectedness of the mind with the larger system of pathways and messages outside the body, Bateson 2000: 456–457).

The concepts of context and contextualism seem to serve as possible ground for relating semiotics with ecology. When Thomas A. Sebeok starts to establish his zoosemiotic research platform in the 1960s, he uses transmissional communication models (Shannon-Weaver, Bühler, Jakobson — see Sebeok 1972b: 13; 1972b: 65) as one of his starting-points. Probably following these, Sebeok links the semantic dimension of communication with context, understanding the latter as information related to functional status, ecological relations and external environmental conditions of animals (Sebeok

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<sup>4</sup> In relation to the natural environment Eugene Nida gives an example with many ecosemiotic associations — the word *run*, whose possible meanings depend on our knowledge of different animal species. For instance sentences “the boy is running” and “the horse was running” are different since the legs of quadrupeds move differently from those of the human. In the sentence “the salmon is running”, the situation is much different because the physical context of moving is water and instead of legs there are fins and flippers. But in the wider context the last expression signifies the vast numbers of salmon swimming upstream to their spawning sites (Nida 2001: 31–32).

1972b: 15; Sebeok 1972b: 80). According to Sebeok, contextual information has critical importance in semiotic studies of animal communication.<sup>5</sup> The meaning of the perceived message in animal communication can be completely different, depending on whether the communication takes place in the territory of the sender or receiver, whether it takes place in open or closed and safe environment, whether participants are approaching each other, withdrawing or holding a constant distance (Sebeok 1990: 112). At the same time Sebeok emphasizes that there are few studies about the use of contextual information in animals.<sup>6</sup> One reason for this is the inaccessibility of the code and the meanings of messages of other living beings for the researcher of animal communication (Sebeok 1972c: 132). In the zoosemiotic works of Thomas A. Sebeok the linkage between meaning and contextual information becomes directly related with the environment in nature and the semiotic research of nature.

### Different perspectives in ecosemiotics

Semiotics and ecology have come into contact with each other at several points and the origins for designing the paradigm of ecosemiotics differ accordingly. In the introduction to the thematic issue of the journal *Sign Systems Studies*, Winfried Nöth and Kalevi Kull distinguish two principally different approaches to ecosemiotics. The cultural theoretic approach proceeds from semiology and structuralism, primarily from the legacy of Ferdinand de Saussure and emerges in the writings of Claude Lévi-Strauss, Juri Lotman, Umberto Eco, and Algirdas Julien Greimas. It investigates to what extent nature is interpreted from a cultural perspective and to what extent various cultures interpret the same natural phenomena differently. The second

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<sup>5</sup> Even more emphasis is given to the concept of context by theoretical biologist W. John Smith. He contrasts it with the notion of signal, and includes in context almost everything in communication, which remains outside of the message. Smith divides context into direct and historical context, where the first includes state of the receiver and the other messages perceived during the same communication. Historical context includes previous experiences of the receiver and its species-specific properties (Smith 1965).

<sup>6</sup> A comparative overview of the use of context in human and animal communication has been given by Pietro Perconti (2002).

approach proceeds from the tradition of general semiotics of Charles S. Peirce and Charles Morris, is present in the works of Thomas A. Sebeok, and treats semiotic processes in nature as phenomena in their own right (Kull, Nöth 2001: 9). The outcomes of the latter approach are the paradigms of zoosemiotics and biosemiotics and the process in semiotics that Winfried Nöth describes as the lowering of the semiotic threshold (see Nöth 2000). These approaches can also be seen as possible answers to the epistemological question: can culture's methods be used to study relations with something that lies outside the borders of culture? Winfried Nöth has described these two alternative routes to ecosemiotics concisely as cultural ecosemiotics and biological ecosemiotics (Nöth 2001: 72–74).

In addition to these two approaches one more intellectual development should be distinguished that has considerably influenced the shaping of ecosemiotic ideas. Namely, the activities of researchers with a background in natural sciences, who include a semiotic perspective in ecological studies of organism-environment relations. This approach is applied for instance by an influential German theoretical biologist Günter Tembrock, who has conceptualized relations between an organism and its environment at different levels. Tembrock elaborates his theory of biocommunication (Tembrock 1971) towards semiotics and distinguishes semiotic types of relations between organism and environment as spatial semiosis, temporal semiosis, semiosis of metabolism, defensive semiosis, exploratory semiosis and semiosis of partners. Tembrock sees these distinctions also as basic types of semiotic relations between humans and their environment (Tembrock 1997). Another predecessor of ecosemiotic thinking is systems ecology where information processes are considered to be crucial constituents of ecosystems regulation (Patten, Odum 1981; for semiotic interpretation see Nielsen 2007). From contemporary authors who have brought semiotic methods into ecology, Almo Farina and his colleagues should be mentioned. Farina's concept of eco-field introduces Jakob von Uexküll's *umwelt*-theory into landscape ecology. Eco-field should be understood as:

the physical (ecological) space and the associated abiotic and biotic characters that are perceived by a species when a functional trait is active. [...] The eco-field can be considered the interference space in which the mechanisms for collecting, concentrating, stocking, preserving and manipulating energy are active. (Farina, Belgrano 2004: 108)

Many other authors have used a semiotic approach in ecological research as well (see Manning *et al.* 2004; Claval 2005; Vladimirova, Mozgovoy 2003).

Also Winfried Nöth's own approach, when he outlines in 1996 the possible paradigm of ecosemiotics, seems to originate rather from the themes that ecology has dealt with under the name of autecology for many decades. For Nöth, ecosemiotics is first of all semiotics of habitat, the aim of which "is the study of the *semiotic* interrelations between organisms and their environment" (Nöth 1998: 333). The important research questions for Winfried Nöth concern the relationship between organism and the environment:

Is it always of a semiotic nature, or is there at least always a semiotic aspect in this relationship, or do we have to distinguish between semiotic and non-semiotic environmental relationships? (Nöth 1998: 333)

In a later article, Winfried Nöth specifies the position of ecosemiotics in relation to biosemiotics and zoosemiotics by writing that, in contrast to these, ecosemiotics should focus on the process of signification (as a sign process without the participation of the sender, in contrast to communication), i.e., semiotic relations between an organism and its nonliving environment (Nöth 2001: 72). Thus Nöth's ecosemiotic views lead towards the autecology that has been described as "the biological relations between a single species and its environment; the ecology of a single organism" (Lawrence 1989: 45).<sup>7</sup>

Another author who has written in more depth about ecosemiotics — Kalevi Kull — seems, according to Nöth's distinction, to belong rather to the tradition of cultural ecosemiotics. Kull's inspirational article "Semiotic ecology: different natures in the semiosphere" published in 1998 can be regarded as expressing a cultural semiotic view because of the following statements.

(1) Differently from the comprehension of Winfried Nöth, ecosemiotics does not deal with all living organisms in their relation to the nonliving environment, but solely with humans, their culture and relation with the natural environment (Kull 1998: 348).

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<sup>7</sup> Ecology has been classically divided into branches of autecology (corresponds to the level of organisms) and synecology (corresponds to the level of communities of species). Sometimes also the concept of demecology (corresponds to the level of population or species) has been used.

(2) Kull defines ecosemiotics explicitly “as a part of the semiotics of culture, which investigates human relationships to nature which have a semiotic (sign-mediated) basis” (Kull 1998: 351).

(3) Man cannot perceive nature without it having first been mediated or filtered by language. Nature in itself (0 nature) and nature that is categorized by language (1 nature) form clearly distinguished types (Kull 1998: 355, 356).

(4) Culture that comes into contact with nature cannot avoid changing nature by describing it and acting upon it (Kull 1998: 347, 359). This change is in principle uni-directional; the development of human *umwelt* leads unavoidably to the diminishing and degradation of 0 and 1 type natures at the expense of humanized nature (Kull 1998: 347, 356).<sup>8</sup>

Kalevi Kull's distinction of four types of nature, which has been derived from Jakob von Uexküll's model of the functional cycle, has a potential to become a grounding principle for ecosemiotic theory.<sup>9</sup> In practical research such typology can be used as a methodological tool for analyzing different forms of mediating nature in culture, or different degrees of nature's culturization, which for instance in landscapes lead to the development of natural, semi-natural and cultural plant communities (see Kull 1998: 359). At least in one study, Kull's typology has been used in practice as the research method for analyzing Estonian folk medicine and the different ways in which

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<sup>8</sup> Similarly to Kalevi Kull also Alf Hornborg emphasizes the ability of the human sign system to influence and change ecological processes. In his overview of the environmental relations of Amazonian native people he distinguishes three subsequent types of sign systems regarding the transformation of nature as sensory, linguistic and economic (Hornborg 2001).

<sup>9</sup> Kalevi Kull explains the distinction of four types of nature as follows: “Zero nature, at least when living, is changing via ontological semiosis, or via physiosemiosis if applying J. Deely's term. The first nature is nature as filtered via human semiosis, through the interpretations in our social and personal knowledge. This is categorised nature. The second nature is changing as a result of ‘material processes’ again, this is a ‘material translation’ in the form of true semiotic translation, since it interconnects the zero and the first (or third), controlling the zero nature on the basis of the imaginary nature. The third nature is entirely theoretical or artistic, non-natural nature-like nature, built on the basis of the first (or third itself) with the help of the second” (Kull 1998: 355). In later conversations Kalevi Kull has stressed that the distinction between four natures should rather be understood processually as different strategies by which nature is generated.

herbs are used in it (Sõukand 2005). At the same time it seems that Kull's approach is more corresponding to *passive* nature (although he uses also several examples involving animals) and is applicable foremost for analyzing relations between humans and inanimate nature, plants or landscapes. This becomes more apparent when we compare Kull's typology with some typology of bilateral relationships such as the one developed by Thomas A. Sebeok to describe possible relations between humans and animals. Thomas A. Sebeok distinguishes situations where human is destructor of the animal, human is the victim of the animal, human is the parasite of animal or vice-versa, animal accepts human as its species-mate and so on (Sebeok 1986: 107). Compared to Sebeok's typology, Kull's approach seems to focus more on the human counterpart and to describe one direction of transmission of messages in communication.

According to Kull the goal of ecosemiotics is the

research on the semiotic aspects of the place and role of *nature for humans*, i.e. what is and what has been the *meaning of nature for us, humans*, how and in what extent we communicate with nature" (Kull 1998: 350) [my emphasis — *T. M.*]

The other participant of this relation, nature, does not have any active role in this process. For instance, describing nature and dealing with it makes nature, according to Kull, become more human-like, but involvement with nature cannot make culture become more nature-like. Likewise, nature that has once been described and changed has few possibilities to revert back to its original state (as such possibilities, Kull mentions the ability to forget, and cultures that do not rely on long-term memory techniques (Kull 1998: 364–365), but even this possibility arises from the peculiarity of culture rather than from the active involvement of nature). In short it seems that applying Uexküll's concept of functional cycle to culture-nature relations may lead to the attributing of the status of "subject" to human culture and the status of "object" to nature, where for the latter there does not remain any voice or right for expression outside mediations by the human sign system.

Both biological and cultural ecosemiotics have their theoretical strengths and weaknesses and research topics in which their use is appropriate. For the formation of a viable ecosemiotic tradition we would need, however, the synthesis of the two. Both approaches in



themselves are limited in their ability to describe culture-nature relations. Biological ecosemiotics leans toward the tradition of natural sciences or, in the better case, towards biosemiotics and becomes mostly interested in theoretical descriptions of sign relations between living organisms and their environment. Cultural ecosemiotics is on the contrary grounded in cultural semiotics, and is therefore bounded by language centrism or by culture centrism and is not capable of shifting the researcher's point of view beyond the limits of human language and cultural system.

The need to overcome this dichotomy between the cultural and biological approach in ecosemiotics has been vigorously expressed by Riste Kesksaik:

In the tradition of cultural ecosemiotics 'nature enters the semiotic scene only as a *referent* (or content substance) of language [...] (Nöth 2001, 73). Biological ecosemiotics relies on the assumption that semiosis occurs in nature irrespective of the knowledge of it. In my opinion the ecosemiotic view only emerges at the crossing of the two perspectives; irreducible to either of them it transcends the linear, dichotomous logic. (Kesksaik 2004: 53)

Only then can ecosemiotics aspire to fulfill its most significant task: "to help to diminish communication problems between human and nature, because from that viewpoint it becomes possible to speak about nature, as it seems to us in culture, and to speak with nature, because its ability of speech has been restored" (Kesksaik 2003: 50).<sup>10</sup> The role of ecosemiotics understood in such a way would be to connect, mediate and translate different sign systems and structural levels of semiotic systems in culture-nature relations, to recognize and explicate possibilities for categorization, textuality and meanings in animate nature, and to bring forth natural, *animal* and nonverbal aspects of human culture and its texts. For the practical research methodology such an approach would bring along the need to take into consideration changing viewpoints between culture and non-culture and different levels of semiotic description, to combine research methods of texts with those of natural science; but also to introduce a phenomenological perspective that allows the researcher to combine his/her participation as an intelligent being in the world of

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<sup>10</sup> "Aidata vähendada kommunikatsiooniprobleeme inimese ja looduse vahel, sest sellelt vaatekohalt osutub võimalikuks kõnelda nii loodusest, kuidas ta meile kultuuris paistab, kui ka loodusega, kuna talle antakse tagasi tema kõnevõime".

text and culture with his/her participation as a living being in the world of nature and its immediate perceptions and meanings.

### **Nature-text as a methodological concept for ecosemiotics**

On the level of practical analysis the necessity to integrate two branches of ecosemiotics should result in the formation of research methodology that allows both the representations of nature in culture and nature in its own semiotic activity to be covered. The perfect model object for such a twofold framework of analysis is nature writing. A nature essay includes the author's imaginations, social, ideological and cultural meaning relations and tensions, but it also embraces organisms, natural communities and landscapes with their special properties and abilities to grow, communicate, learn and multiply. The understanding of nature writing does not depend solely on interpretation of the written text, but also on structures of outer nature, which have their own memory, dynamics and history, and if those outer structures change, then the field of possible interpretations for the written text will also change. The object of ecosemiotic research should therefore also be considered to be twofold: in addition to the written text that speaks about nature and points to nature, it should also include the depicted part of the natural environment itself, which must be, for the relation to be functional, to at least some extent textual or at least textualizable.<sup>11</sup> I will call the unit that is formed through meaning relations from those two counterparts *nature-text* (Figure 1).

The relations between the written text and natural environment operate similarly to the relation between two interconnected texts or a text and its context, where the interaction significantly shapes the possible interpretations of the text. The relation here is complementary in the sense that the text does not need to convey all meanings, as they are present in the environment and familiar to the reader. Pointing to them is often enough. Correspondences between the written text and textual nature can also be structural (e.g. a sequence of a text

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<sup>11</sup> Compared to the written text, the structure of the natural environment and its perception is multimodal. Therefore natural environment and written text do not relate as two equal counterparts, but the relation corresponds rather to a one-to-many relationship.

following a nature trail), but there is hardly one-to-one correspondence between the two entities. Rather, the written text is contrasted with a space of possible structures and meanings that could exist in the depicted natural environment. In nature there is simultaneously taking place a multitude of parallel events or stories that do not form a linear sequence, but occur in various media and sign systems.

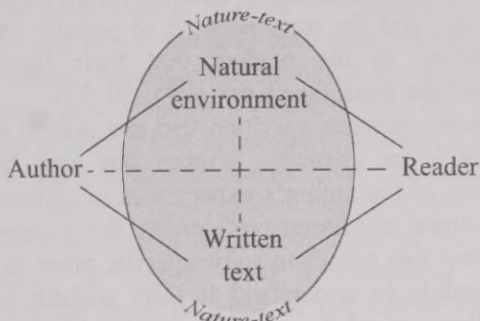


Figure 1. Nature writing conceptualized as nature-text: components and inter-relations.<sup>12</sup>

In order to appear and become related with nature writing, the meanings of nature need mediation by human semiotic processes. Therefore the author of the written text and the reader should also be included in the model of analysis, which in that case becomes quadripartite: (1) textual natural environment; (2) written text; (3) author of the text; (4) reader. Every participant is characterized by its own semiotic activity, and relations between participants are not fixed but form a specific pattern in each and every case. The reading experience of a nature essay may become the cause for the reader to visit the depicted natural environment, but it may also well be the other way round — the reader is first familiar with the natural environment and then becomes interested in nature writing. The reading experience of a nature essay can differ according to the reader's familiarity with the depicted region: whether the reader lives

<sup>12</sup> Following Mikhail B. Yampolsky's terminology (see below) nature-text can be understood as a set of physically justified meaning connections between text written in a conventional language and the natural environment.

in the region or does not have any personal experience with the place. Also, if nature writing is usually associated with the inspiration acquired from the natural environment and with the attempt to share appreciation toward nature, then this is not so in all cases. In the tradition of Estonian nature writing an incident is known where the environment became endangered because of a written text. A story was written about a mineral island in Muraka raised bog, praising its quietude and beauty, and the story became so popular and provoked such intense interest in the readers that their increased visits eventually damaged the place (see Kask 1995: 50–53).

Meaning relations between a written text and natural environment may also have different intensity. Written text may be open and include descriptions of the author's experiences of different places as well as various cultural and literary references. But a nature essay can also be a closed text that relates to some specific place in such a way that it is not possible to understand it fully without knowing the depicted place. Because of the specific relationship with the local environment, nature-text is characterized by *locality*, understood as "the characteristic of semiotic structures by which they merge into their surroundings in such a way that they cannot be separated from their environment without significantly altering their structure or information contained in this structure" (Maran 2002: 70). This property of nature essays may become noticeable for instance during the process of translation, where references in the text to the local natural environment may show remarkable resistance to the translator's efforts.

### **Arguments for including natural environment in the analysis**

Such a theoretical approach to nature writing may raise questions as to what is the essence of this other part that remains outside of the written text, and on what grounds can this natural structure be taken as a part of an object for semiotic research. These questions are connected with our capabilities to become related to and to interpret nature, both as humans in our everyday practices and as researchers on a meta-level. Some answers to these questions can be found from the tradition of Tartu semiotics. In general, in the Tartu–Moscow semiotic

school not much attention was paid to the natural environment. Semiotics in Tartu developed as a part of the European semiological tradition and thus considered literature and culture to be its primary research object. Also the distinction between culture and things outside it, which became one of the central constructs of the Tartu–Moscow semiotic school, probably impeded a constructive approach to the physical environment. In some interpretations of Tartu–Moscow semiotics this distinction has also been expressed as the opposition of culture and nature (Sonesson 2000). At the same time, another central concept of the Tartu–Moscow semiotic school, the notion of *text*, was understood so generally that in certain conditions it could also include some parts of the natural environment. Juri Lotman and his colleagues understood the notion of text ambivalently and broadly, defining it not by written form or linear structure, but rather on the basis of operating and functioning in culture. Text is something that has specific meaning from the point of view of the carrier of culture and has integral function from the point of view of the investigator of culture (and it is thus simultaneously the concept of the object level and meta-level; see Ivanov *et al.* 1998: 65). Such view allows national costumes, pieces of music and paintings to be considered as texts, given that these are used, understood and valued in culture. Also parts of the natural environment can act as texts if there is a custom in the given culture to interact with nature's structures in a way that they become distinctly meaningful in culture.<sup>13</sup>

In Estonian culture the existence of many semi-natural plant communities such as wooded meadows and coastal meadows (that persist only with the mild but continuous influence of human culture, see Kull 2001), strong tradition of nature writing and nature films, and rich folklore about natural phenomena give evidence about the culture's practice to be meaningfully related to the natural environment (for overview, see Maran, Tüür 2005). Such valuation of nature

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<sup>13</sup> Anti Randviir distinguishes in his article "Loodus ja tekst: tähenduslikkuse tekitamine" between speaking about nature as text metaphorically and texts that exist in nature. Into the latter category, Randviir puts phenomena that can be read: "read in the sense that because of our (cultural) experience we can set some limits of interpretation to them and can very probably evaluate their semiotic nature (and origin) [lugeda selles mõttes, et me oskame tänu oma (kultuurilisele) kogemusele neile seada mingisugused tõlgenduspiirid ning oletada küllaltki suure tõenäosusega nende märgilist päritolu (ja märgilist loomust)]" (Randviir 2000: 141).

could also be the best proof that, at least in Estonian culture, it is reasonable to consider the natural environment as a textual entity.

A representative of younger generation of the Tartu–Moscow semiotic school, Mikhail B. Yampolsky has written about natural or physiognomic text that is expressed as relations between the part of culture that is fixed into conventional language and the real world. Such text is created according to Yampolsky in the language of physically justified connections. He notes that interpretation of natural or physiognomic text is problematic, because of the absence of an effective code for reading (Yampolsky 1989: 62–63). At the same time it seems that for the semioticians of the Tartu–Moscow school, a phenomenon in culture does not need to be decoded or even decodable in order to acquire the status of text:

utterances circulating in a collective but not understood by it are attributed textual meaning, as occurs with fragments of phrases and texts brought from another culture, inscriptions left by a population that has already disappeared from a region, ruins of buildings of unknown purpose, or statements introduced from another closed social group, for instance, the discourse of doctors as perceived by patient. (Lotman, Pjatigorskij 1977: 129)

Natural environment is similar to foreign cultural texts, which are imported or carried over from another culture, or to historical texts, which have been long forgotten and then retrieved. In the case of foreign cultural texts a specific addresser may be unknown, their code is often unfamiliar and as such they tend to bring along cultural polyglotism (see Ivanov *et al.* 1998: 44); the same seems to apply to nature as text. Meaningful relations with the natural environment often take place in the form of a communicational situation where the specific addresser is unknown or is absent altogether, or where addresser and addressee are principally different by belonging to different species.<sup>14</sup>

Here it is relevant to introduce the argumentation by British education theorist and semiotician Andrew Stables according to which, in

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<sup>14</sup> Similarly to the endeavor of the present article to use the concept of text for studying culture–nature relations, Kalevi Kull has also recognized the need to widen the notion of text proceeding from the Tartu–Moscow semiotic school. In biosemiotic paradigm he has proposed the term *biotext*, understood as an organism’s ability to interpret sign processes taking place inside itself (Kull 2002: 329–332).

modern literary theory the position of author is anyhow blurred and that makes it possible to open the concept of text up also to natural phenomena. Writings by Roland Barthes, Hans-Georg Gadamer and others have engendered the view that instead of personal authorship the meanings of texts are socially or culturally constructed. Stables notes, that in landscapes the network of shared meanings extends beyond human sphere and that it is difficult to make a distinction between the creative activities of humans, other life forms and natural forces (Stables 1997). From such a viewpoint, natural environment can be understood to be a result of common creative activity, "written" by individuals of many different species, each proceeding from their own sign system, *umwelt*, and life activities. Some of those authors, such as beavers and ants shape landscape to a remarkable degree and make changes that influence the habitats of many other species, humans included. Also tracks of wild animals in the landscape, which connect drinking places, feeding areas, and resting places, are part of environmental scripture. Although the descriptions of such changes in the environment and the names of animals that have caused these are attributed by human culture, one must admit that ant nests and beaver dams in themselves are the creation and self-expression of animal authors.

In many cases the living activities of different organisms merge in the environment in a way that makes it very difficult to distinguish the contributions of different species in it. As such, nature becomes a medium or *interface*, which different living beings read and where they write into. The example of such collective creation of environment is forest. Life cycles of different organisms in forests combine in complicated ways; some species form habitats for others, the decay of some organisms becomes food and source material for others, and so on. Forest is full of information and communicative relationships, which, related to the topic of this article, brings up the question of how people read forests, what aspects of it they are able to interpret and how.

To understand the specific interpretation and communication practices that humans use for communicating to and relating with nature, the concept of zoosemiotic modeling by Thomas A. Sebeok may turn out to be useful. Sebeok presented this model as a criticism of the distinction of semiotic modeling systems made in the Tartu–Moscow semiotic school. As is well known, the Tartu–Moscow

school has considered natural language to be the primary modeling system. Complex cultural phenomena (literature, art, music, film, myth, religion) are regarded as secondary modeling systems, because these are derived from and built upon natural language (e.g., Lotman 2000: 47–48). Thomas A. Sebeok has argued against such categorization, claiming that natural language is both ontogenetically and phylogenetically preceded by yet another modeling system — the-world-as-perceived, where signs are distinguished by the organism's species-specific sensory apparatus and nervous system and aligned with its behavioral resources and motor events (Sebeok 1988: 73–74). According to Sebeok, humans possess two mutually sustaining modeling systems — the anthroposemiotic verbal, which is unique to the human species, and the zoosemiotic nonverbal, which unites us with the world of nonhuman animals. The existence of a primary zoosemiotic modeling system is hard to notice for humans, because we are born into it (which makes it self-evident) and also because it is later to a large extent overwritten by the system of conventional meanings. The existence and properties of the-world-as-perceived become, however, more apparent if the perceptual possibilities and communication systems of different species are studied. Direct and spatial perceptions, tactile and olfactory sensations as well as many occurrences of nonverbal communication between humans belong to the sphere of nonverbal modeling. Language resources are often insufficient for describing these kinds of phenomena, but it is certainly possible (and this is often done) to express these kinds of sensations by textual means.

Concerning nature writing such view regards writers and readers as two-sided creatures: as cultural beings, we are capable of cognition, language and literary expression but on the other hand as biological organisms, we are capable of immediate perception of natural phenomena through our senses and of participation in the nature's web of relations and meanings. As embodied sensual creatures we humans communicate with other living beings and natural environments by means of sounds, sights, scents and touches, bodily movements and all corresponding perceptions. As intellectual beings we are able to discern and describe these sensations, to convey and value these in writing. The distinction between two modeling systems has also an inner dimension in the form of understanding our own bodily processes and verbalizing these. Mental states with biological background,



such as anxiety, fear, affection and fury are also important motives for literary imagination. The questions about one's own inner feelings, desires and phobias, that can be summarized as a quest to understand one's inner nature has been a backbone for many classical novels.

Nature writing that relates to immediate environmental experiences is probably the most suitable material for studying traces of such zoosemiotic modeling. The attention of the researcher can turn here to the perceptual properties of humans as biological species, to the ways how one can relate perceptually and bodily with the environment and to the possibilities to express these experiences. Zoosemiotic nonverbal modeling enables communicative relations between humans and animals, as it relies on biological foundations that are common to humans and many animals (Sebeok 1990). Similarities, which make the occurrence of meaningful relations between humans and animals possible, lie in morphology (bilateral symmetry, positions of limbs, body and face), perception (concordance in sense organs, communication channels and diapasons), basic needs and dispositions (need for food, water, shelter, avoidance of accidents, pain and death), being subjected to the same physical forces (gravity), inhabiting the same environment and relating with it, etc.

### **Nature writing as regarded through the concept of nature-text: some ethical implications**

If we agree with the arguments given above that it is reasonable to consider natural environment as being textual and related to written texts, then this may lead to some questions about the effects that this new type of relation may have on nature writing and its research. These implications apply to some degree also to other texts of culture that develop close contact with natural environment such as nature documentaries, folk knowledge about the nature, environmental art and others. First, it seems that understanding nature writing in the framework of natural environment, written text, author and reader opens up new possibilities to define nature writing. This is so because of the changed position of nature writing — a written text that is related through meaning relations to a part of natural environment, carries out two processes: it communicates nature and at the same time it values nature through that communication.

During each writing act choices are made among alternative experiences, reflections, imaginations, and ideas and the results of those choices are fixed in the linear sequences of words. This is especially so because of a multitude of events, stories, perceptions and sign systems present in nature compared to the relatively constrained scope of a nature essay. As these choices made determine what will and what will not be communicated in human culture, writing activity inevitably becomes decision making concerning the values in culture. At a higher cultural level also, nature writing as a phenomenon can be seen as a possible value decision of culture. By changing individual experiences of the author to become a part of wider experience of culture, nature writing becomes a strategy for regarding and valuing nature. Writing about nature is simultaneously a recognition that nature as such is worth writing and talking about. If nature is understood as being composed of various *umwelten* and semiotic spheres, which are foreign and partly inaccessible to humans, then every nature essay turns out to be an attempt to raise these natural foreign semiotic spheres above the interpretation threshold of human culture. Therefore, according to the concept of nature-text, nature writing could be understood as an aesthetical expression of the appreciation of the foreign semiotic spheres of nature.

Another conclusion that can be derived from regarding nature writing as nature-text relates to the position of nature writing in culture. This thought can be expressed as the combination of generality and specificity (also as a combination of intelligibility and unintelligibility) of nature essays. Existence of intense meaning connections between the written text and the natural environment determines significantly the possibilities for interpreting nature essays. On one hand the strong relationship with the processes and phenomena of the natural environment makes the structure of the nature essay more predictable than it is in belletristic writings. Movement in nature, encounters with different animals, names and descriptions of various organisms, their life and behavior, climate conditions, seasonal changes and personal recollections of experiences in nature are the most common elements for compiling nature essays.

On the other hand the adequate interpretation of the nature essay is only possible if the reader has a nature experience that is at least to some extent similar to that of the author. If the nature experience of the reader is very different from that of the author or is absent

altogether, then many meaning connections that point in the written text to the natural environment remain inaccessible to the reader. The marginal position of nature writing in contemporary culture (as is the case in Estonian culture) seems to derive from that peculiarity of nature writing. For the modern day urbanized reader access to the natural environment is inhibited both physically and semiotically through negligence and lack of knowledge about nature's forms of being, various signs, and communication processes within it. In such a situation the nature writing that presupposes competence of interpreting and relating two types of text — written text and textual natural environment — remains feasible to few readers. Works of nature writing become closed texts and common consciousness of culture ignores them as unimportant or nonexistent. At the same time the writers and readers of nature writing form a small but quite well established and homogeneous group (for instance in the Estonian tradition there are a few authors, who, besides nature essays, also write belles-lettres). In addition to attachment to nature, also the mutually supporting effect of the two types of text may contribute to the formation of such a group — nature writing leads readers to experience nature directly without any literary mediation, and personal nature experiences of individuals direct them back to nature writing to find out about similar experiences of other people.

### **Conclusions**

An important background and support for developing ecosemiotic views is the understanding that the ecological approach itself is not alien to semiotics, but is in fact present in the foundations of semiotics. Besides explicitly ecosemiotic writings, the communication models by Roman Jakobson and Thomas A. Sebeok, the contextual thinking of Gregory Bateson and works of authors of language philosophy and translation studies can also turn out to be useful for enriching semiotics with the ecological perspective.

Ecosemiotic itself has several roots and interpretations. The most important of these are biological and cultural ecosemiotics that follow the dividing line between American pragmatist semiotics and European semiology. As ecosemiotics endeavors to study both semiotic activity in nature and its cultural representations, this divide becomes

particularly distressing. Riste Keskskaik has described the main goal of ecosemiotics as solving communication problems between humans and nature. This essential task can only be fulfilled if ecosemiotics studies nature's representations in culture, semiotic activities as they take place in nature itself, and what may be most important, pays attention to the ways how these two are interrelated. The present article discusses the possibilities for using the legacy of Tartu–Moscow semiotic school for developing ecosemiotics. The concept of nature-text is introduced as a methodological possibility to overcome the gap between cultural and biological ecosemiotics. Describing the ways in which nature is represented in culture in the same framework with semiotic activities of nature itself may help us to pinpoint the problems in our communicative relations with it, and maybe even explicate possibilities for the restoration of concordance.<sup>15</sup>

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### **К проблеме синтеза методологии экосемиотики: понятие текста природы**

Цель статьи — разработка экосемиотики в плане практического метода анализа. Для этого сначала рассматривается связь значения и контекста как имманентно содержащаяся в семиотике возможность экосемиотического подхода. Затем анализируются разные перспективы в экосемиотике с помощью описания биологической и культурной экосемиотики и критического перечитывания трудов Винфрида Нёта и Калеви Кулля. Автор подчеркивает необходимость комбинирования этих экосемиотических подходов таким образом, чтобы возникающий синтез как учитывал семиотичность самой природы, так и умел анализировать изображение природы в написанных текстах. Для этого создается модель текста природы, которая объединяет написанный текст и природное окружение, связанные между собой механизмом означивания. Для поддержки концепции текста приро-

школы, которые достаточно широки, чтобы охватить семиотическую активность и создание среды не только человека, но и других живых существ. В конце статьи концепция текста природы используется для определения понятия «литературы, описывающей природу» в качестве признания человеком чуждой ему семиотической сферы и для объяснения маргинальности литературы о природе, обосновывая это необходимостью интерпретации двух разных типов текстов.

### **Ökosemiotika metodoloogia sünteesi poole: loodusteksti mõiste**

Artikli eesmärgiks on ökosemiotika edendamine praktilise analüüsimetodi suunas. Selleks tutvustatakse esmalt tähenduse ja konteksti seost kui semiootikas immanentselt sisalduvat võimalust ökoloogiliseks vaa-teks. Seejärel analüüsitakse erinevaid perspektiive ökosemiotikas, kirjeldades bioloogilist ja kultuurilist ökosemiotikat ning lugedes kriitiliselt W. Nöthi ja K. Kulli käsitlusi. Autor rõhutab vajadust kombineerida neid ökosemiotilisi lähenemisi viisil, et tekkiv süntees arvestaks ühtaegu nii looduse enda semiootilisust kui suudaks ka analüüsida looduse kujutamist kirjutatud tekstides. Selle eesmärgi täitmiseks tutvustatakse loodusteksti mudelit, mis ühendab kahte tähendusseoste läbi seotud osapoolt — kirjutatud teksti ja looduskeskkonda. Loodusteksti kontseptsiooni toetuseks tutvustatakse Tartu–Moskva koolkonna semiootikute tekstikäsitlusi, mis on piisavalt avarad hõlmamaks peale inimeste ka teiste elusolendite semiootilist aktiivsust ja keskkonnaloomet. Artikli lõpus kasutatakse loodusteksti kontseptsiooni, et määratleda looduskirjandust kui inimese jaoks võõrsemiootilise sfääri tunnustust ning selgitada looduskirjanduse marginaalsust, põhjendades seda kahe eri tekstitüübi interpretatsioonivajadusega.



## Gathering in Biosemiotics 6, Salzburg 2006

*Günther Witzany,<sup>1</sup> Maricela Yip<sup>2</sup>*

The sixth *Gathering in Biosemiotics* was organized in Salzburg, Austria, by Günther Witzany and Wolfgang Hofkirchner.<sup>3</sup> Fifty-eight scientists from various scientific fields like philosophy, systems theory, semiotics, linguistics, semantics, mathematics, statistics, psychology, physics, medicine, biochemistry, embryology, molecular biology, microbiology, cell biology, genetics, epigenetics, evolutionary biology, zoology, mycology and botany participated.

### Introduction

Biosemiotics is a transdisciplinary science which investigates sign processes (semioses) within and among living organisms with theoretical and empirical studies. The signs used underlay three levels of semiotic rules. Syntactic rules govern combinatorial possibilities, be they physical, chemical, spatial, temporal, or rhythmical. Pragmatic rules govern interactions and interactional contexts like growth, development, defence or mating. Semantic rules depend on their contextual use, i.e. semantics is visible in the specific function of signs which represent their meaning.

Individuals in populations share a common repertoire of signs and rules. This is valid also at the level of cell biology. Dependent on the context of use the same signs and sequences of signs may have different informational content. Therefore it can be understood that from the same genetic dataset it is

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<sup>3</sup> W. Hofkirchner is from the Center for Advanced Studies and Research in Information and Communication Technologies & Society (ICT&S), University of Salzburg, Austria.

possible to produce different cell types according to different methylation patterns of the chromosome for different needs.

Biosemiotics investigates not only sign processes within and among cells but also immunological, neuronal or hormonal sign sequences. For many biosemioticians life starts with sign processes and vice versa (Hoffmeyer 1996; Kull 1999; Barbieri 2001; Markoš 2002; Emmeche, Hoffmeyer 2005; Witzany 1993; 2000; 2006). Until recently biosemiotic terms were viewed as mere metaphors by molecular biology, genetics, ecology and evolutionary biology because of the conviction that they could be replaced completely by chemical and physical descriptions. The hardly bridgeable gap between chemical-physical and biosemiotic descriptions allow biosemiotics a clear distinction between life and non-life or as Howard Pattee (2005: 321) said: "Life is distinguished from the nonliving world by its dependence on signs". Biosemiotics therefore broadens our understanding of all biological processes. Life processes depend not solely on physical/chemical changes but additionally on communication and information processing which are determined by semiotic rules which are coherent with but different to natural laws. Their success or failure decides the growth, development, disease or death of all living beings.

### **Pre-programme: Biosemiotics in transdisciplinary contexts**

To give a broader audience the possibility of getting in contact with biosemiotics the organizers Günther Witzany and Wolfgang Hofkirchner initiated a pre-programme, one day before the official start of the Gatherings with experts, in several cases non-semioticians, who presented their theoretical and empirical work with strong relation to biosemiotics.

After the introduction given by Wolfgang Hofkirchner, Jesper Hoffmeyer (Copenhagen, Denmark) opened with an analysis of the work of Gregory Bateson, one of the forerunners of biosemiotics. Frantisek Baluska (Bonn, Germany) reported about "neurobiological" communication in plants: with synapse-like cell-cell-communication plants can use a kind of signal-transmission system which enables them to develop a great variety of behaviours also in their sessile lifestyle. Peter Barlow (Bristol, England) explained a model (L-systems) of constructing algorithms which could represent succession states recognized as proceeding from the two 'pillars' of living organization – metabolism and morphology. His model proposed to look at the semiotic contexts of these "living" algorithms. Randy Jirtle (Durham, USA), one of the pioneers in epigenetic research, reported on his breakthrough research success when they detected genomic sequences which are inherited either paternally or maternally. So they could prove that special parental feeding behaviours can influence and change genomic expression

patterns of descendents. Kalevi Kull's (Tartu, Estonia) contribution showed a common feature of semiotics and biosemiotics: the ability to study qualitative diversity. Biosemiotics could be a new approach for better understanding of semiotic selves in non-human living beings and their communicative identities covering all biological species, social groups and even perceptual categories. Günther Witzany's (Salzburg, Austria) talk focused on recent research on virology. So-called "junk-DNA" which has been thought to be useless remnants of former evolutionary stages and which represent 97% of the human genome are now being recognized as higher order regulatory domains which regulate transcription, replication, repair and recombination in all detailed steps and substeps. They descended most likely from viruses with persistent non-lytic lifestyle which use genomes of cellular life forms as a comfortable life habitat and organize host genome syntax according to their needs and those of their host organisms.

In the afternoon Nikolaus Bresgen (Salzburg, Austria) demonstrated the complex phenomenon of apoptosis, that success or failure of all cell signalling processes depends on the context in which these signals are used. Erich Hamberger (Salzburg, Austria) focused on some transdisciplinary remarks of biosemiotics in the relationship of *word*, *sign* and *signal* dependent on their (bio-) cultural background in which this relation is common use. Therefore also on the cellular level similar functions can be analysed like *transduction*, *transmission* and *signalling*. Klaus Fuchs-Kittowski (Berlin, Germany) developed a non-mechanistic but semiotically inspired informational theoretic perspective on biotic information processing especially for some ethical aspects. Donald Favareau (Singapore) looked at animal sensing, acting and knowing and suggested the Peircian levels of signs (icon, index, symbol) to be appropriate tools for investigating animal perceptual worlds and to reconstruct a human knowledge generating hierarchy of sign relations. Albert Duschl (Salzburg, Austria) referred to the evolution and mechanisms of mixed analogue/digital information processing in living cells according to an information theoretical perspective which looks at living organisms as information processing "living computers". John Collier (Durban, South Africa) suggested a systems biological approach for a better foundation of biosemiotics. According to the model of Robert Rosen's systems theory, Collier suggested to understand certain living processes in a mechanistic perspective rather than needing semiotic analyses. Ingolf Schmid-Tannwald (Munich, Germany) tried to integrate semiotic aspects in a systems theoretical realm.

## Programme

The main programme of the Gathering was separated into seven sections. We will report selected examples. The starting section was *Semantics in*

*Biosemiotics* with contributions on the emergence and generation of meaning functions in living entities. Marcello Barbieri (Ferrara, Italy) started with his model of the emergence of the genetic code as being independent of contextual needs whereas the later steps of sequence order and the emergence of a great variety of other biotic codes have been context-dependent. In the section *Methods of Biosemiotics* four talks suggested how biosemiotic methodology could be developed. Kalevi Kull (Tartu, Estonia) presented a clarifying overview on methodological presuppositions and differentiations of biosemiotics in contrast to non-biosemiotic perspectives. Peter Harries-Jones (Toronto, Canada) suggested the installation of an editorial group for bio-semiotics at Wikipedia. In the section *Semiotics in Biosemiotics* Donald Favareau (Singapore) suggested in his contribution to choose a unique vocabulary for biosemiotic studies in using the Peircian icon, index and symbol.

The second day of the official programme started with six talks in the section *Applied Biosemiotics* with Argyris Arnellos (Athens, Greece) with a biosemiotic analysis of the functions of the serotonin-complex. Almo Farina (Urbino, Italy) presented his eco-field hypothesis and its relevance for humans to understand resources and functions of cultural landscapes. Toshiyuki Nakajima (Matsuyama, Japan) spoke about exchange of genetic elements and their relevance for evolutionary processes. Günther Witzany (Salzburg, Austria) developed an applied biosemiotics of fungi for the first time and gave an overview about all levels of rule-governed sign-mediated interactions within and among fungal organisms. In the afternoon a broader section focused on *Biosemiotics and Information Theory*. In several contributions different concepts were presented of the term "information" and its relation to biosemiotics. Pierre Madl (Salzburg, Austria) and Maricela Yip (Salzburg, Austria) demonstrated recent results of research on bio-photonics and its relevance for a non-linear view of living processes.

The last day started with the session on *Evolution, Development and Sign Functions*. Marcella Faria (São Paulo, Brazil) reported about sign-processes in metabolism, cell-cycles, cell-development, neuronal communication and the immune-system. Randy Jirtle (Durham, USA) demonstrated the predictability of disease susceptibility depending on epigenetic induced changing expression patterns of the genetic code which have been changed by different nutritional behaviour. Mario Gimona (Santa Maria Imbaro, Italy) presented his concept of protein linguistics as a grammar for protein assemblies which could be a synergetic concept in the field of applied biosemiotics. The afternoon session focused on *Biosemiotics and Mind Models* with various concepts of consciousness, mind and language. Robert Logan (Toronto, Canada) introduced a new definition of "information" which clarified the interdependence of the emergence of languages and cultures in non-human living nature as well as in human life.

## Summary

This congress showed clearly that the great variety of disciplines which have been represented by the participants could focus easily on diverse aspects of biotic sign processes. This seemed to be a unifying perspective in contrast to other disciplines which are less able to develop a common repertoire of methodological, theoretical and empirical realms of investigations. The exchange of concepts, ideas, opinions and perspectives was less dogmatic and more transdisciplinary which was expressed also by leading biologists. This could lead to a new perspective on living nature and therefore to changing the relationship of humans and non-human life in general and in detail. The full programme and all of the abstracts can be downloaded at the congress website.<sup>4</sup>

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<sup>4</sup> See <http://www.biosemiotics2006.org/>.

## The 7th Gathering in Biosemiotics — a review

*Yair Neuman*<sup>1</sup>

In a post-modern era in which the fragmentation of knowledge is evident in every academic field, the attempt to gain a meta-perspective seems like an old anachronistic venture. However, an emerging new field of inquiry seems to challenge this fashionable dogma. Biosemiotics is a field of inquiry that seeks to understand a variety of biological phenomena as sign-mediated processes. For example, to understand biological phenomena, such as immune recognition or genetic coding, as biological processes constituted by signs and their communication.

Biosemiotics is a field with a Janus face. On one hand, it is an antiquarian field which is nurtured by the semiotic tradition of scholars such as Peirce, Uexküll, and Bakhtin. On the other hand, it is a field that seeks to address the challenges of modern biology. In this sense, biosemiotics is deeply rooted in the past but tries to avoid anachronism and irrelevance by addressing current challenges. This is not a simple task since it forces the scholars operating within the biosemiotics community to delicately resonate between old semiotic terminology and current scientific knowledge, and to point to the benefits of conceptualizing biological phenomena from a semiotic perspective. This task is under the continuous threat of falling into obscure jargon and of “name calling”. Indeed, if biosemiotics wants to establish its status as a serious field of inquiry it will have to prove the advantages of approaching biological phenomena from a semiotic perspective, and to convince mainstream biology that this advantage exceeds the boundaries of language-games played by a closed group of scholars.

These challenges attracted a group of researchers who participated in the 7th Biosemiotics Gathering.<sup>2</sup> The gathering took place at the University of

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<sup>2</sup> The earlier Gatherings in Biosemiotics took place in Copenhagen (2001, 2003), Tartu (2002), Prague (2004), Urbino (2005), and Salzburg (2006). See also Emmeche 2001; Kull 2002a, 2002b; Witzany, Yip 2007a, 2007b.

Groningen under the kind hospitality of Prof. Barend van Heusden from the department of Comparative Literature, from June 6 to June 9, 2007. The participants celebrated the publication of the first book in the new book series dedicated to biosemiotics (published by Springer) and were informed that Springer will launch the new *Journal of Biosemiotics* under the lead of the editor, Prof. Marcello Barbieri from the University of Ferrara. However, the most important thing in the Gathering was the stimulating presentations and the passionate intellectual discussions that accompanied them. As an interdisciplinary researcher who has participated in many different conferences, I found the Biosemiotics Gatherings to be one of the most intellectually stimulating environments I have ever encountered. These are not conventional social/political conferences of academics that come to show themselves, shake hands with journal editors, to promote their doctoral students or to create alignments with colleagues for getting research grants. The Biosemiotics Gathering was a rare occasion in which scholars who love to think together gather to passionately discuss their ideas. This unique atmosphere is evident in the interdisciplinary nature of the participants. Although the main concern of biosemiotics is with biological systems, the participants extend this basic sense to include in their studies phenomena from other fields to include psychology and literature. Covering in a short academic review all of the presentations is an impossible task and therefore I decided to present some highlights that reflect only my personal taste. While the Biosemiotics Gatherings involve a core of people who regularly participate in the gatherings, I decided to open my presentations' survey with the newcomers.

Victoria N. Alexander, an American scholar and novelist, is a co-founder and director of the Dactyl Foundation for the Arts & Humanities, in New York City. In her dissertation Alexander has investigated chance and teleology in narrative by writers like Saul Bellow, Henry James, Milan Kundera, Vladimir Nabokov, and C. S. Peirce. In her presentation she discussed the way teleology is associated with emergence and these are associated with poetics. The second newcomer to the gathering was Charles Goodwin, a leading linguist from University of California, Los Angeles, who gave an inspiring talk about the way in which language, human action and cognition constitute situations of activity from girls' play to the work of archeologists. Cognition, as Goodwin suggests, exists in the multiplicities of sign modalities: language, gestures and intonation. The attempt to locate cognition in a wider semiotic context was the subject of another talk by Stephen J. Cowley, a psychologist from the UK. Cowley presented the thesis that infants use semiosis to organize their experience and elaborated on this topic from his recent publications.

Among the "core" biosemioticians, Jesper Hoffmeyer, Claus Emmeche, and Frederik Stjernfelt, all from the University of Copenhagen, gave talks that concerned the meaning of biosemiotics from a wider perspective. Hoffmeyer reemphasized the meaning and importance of biosemiotics; Emmeche, a

philosopher of science, reflected on biosemiotics and biological sciences from a Kuhnian perspective; and Stjernfelt pointed to the roots of biosemiotics in German thought. Other presentations aimed to point at the alternative biosemiotics may provide to mainstream biology. Marcello Barbieri passionately argued for the relevance of biosemiotics by discussing the evo-devo case and Kalevi Kull, a naturalist and the head of the Semiotics Department at the University of Tartu (Estonia), made the radical statement that biosemiotics can serve as an alternative to (neo)Darwinism.

Some talks discussed more specific applications of biosemiotics. Yagmur Denizhan, a professor of Electrical Engineering and a polymath from the University of Bogaziçi (Turkey), presented the case of magnetotactic bacteria as a case study for a biosemiotic description. Marcella Faria, a biochemist from the University of São Paulo (Brazil) examined the non-coding status of some DNA sequences through a biosemiotics perspective and illustrated how this perspective may better explain the role of these structural features in the context of a whole “meaning making” organism. Almo Farina, a landscape ecologist from the University of Urbino (Italy), discussed the “sound-scape” of birds, as a landscape of meaning which is crucial for understanding birds’ activity.

What can we learn from this partial list of presentations? The first lesson which is rather trivial is that biosemiotics is still a young interdisciplinary field of inquiry which is seeking its way in the academic world. The second lesson is that biosemiotics is one of the few serious alternatives to mechanical biology. As such, it is a venture worth pursuing.

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### Theory of semiotics

*Floyd Merrell.* Toward a concept of pluralistic, inter-relational semiosis

*Paul Bouissac.* Semiotics as the science of memory

*Thomas J. Bruneau.* Time, change, and sociocultural communication:  
A chronemic perspective

*Jaan Valsiner.* Semiotic autoregulation: Dynamic sign hierarchies  
constraining the stream of consciousness

### Semiotics of culture

*Anti Randviir.* On spatiality in Tartu–Moscow cultural semiotics:  
The semiotic subject

*Jelena Grigorjeva.* Space-Time: A mythological geometry

### Sociosemiotics

*David Herman.* Ethnolinguistic identity and social cognition:

Language prejudice as hermeneutic pathology

*Janice Deledalle-Rhodes.* The relevance of C. S. Peirce for socio-semiotics

*Andreas Ventsel.* The construction of the 'we'-category: Political rhetoric  
in Soviet Estonia from June 1940 to July 1941

### Ecosemiotics

*Timo Maran.* Towards an integrated methodology of ecosemiotics:

The concept of nature-text

### Reviews and notes

*Günther Witzany, Maricela Yip.* Gathering in Biosemiotics 6, Salzburg 2006

*Yair Neuman.* The 7th Gathering in Biosemiotics a review

