MAPPING THE WORLD: TOWARDS A SOCIOSEMIOTIC APPROACH TO CULTURE

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CONTENTS

INTRODUCTION

The mapping of the world is a topic that brings together numerous essential themes in both semiotics and culturology. As for semiotics, probably one of the most important, though often implicit premise compares mapping to the notion of modelling. Thus mapping unites presentational and representational codes so as concerning both imagining the environs and discoursing on the respective image(s). Yet, when talking about modelling in the context of semiotics, it often occurs extremely difficult to distinguish between presentational and representational codes. In the study of man as the 'symbolic animal', perception and cognition are mostly united, and 'representation' is both the starting point and finish of analysis. The presentation of images about the world either through language or other articulation devices involves modelling. So we can see that cognitive mapping is engaged in all semiotization of the environs beginning from the formation of the *Umwelt* on the biological level to the presentation of 'cultivated understanding' of the world in what taken as 'traditional maps' in the form of artifacts. The current work will try to track down a hypothesis that the principles of cognitive mapping apply for multiple levels of spatial modelling. By the latter we mean, on the one hand, imagining space, the shaping of physical surroundings, representation of the perceived and cognised environment. On the other hand, we shall dwell upon the possibility that the principles of cognitive mapping that work on the individual level, apply also for the evolution of the understanding the world and the representation of that understanding on the level of sociocultural systems diachronically.

No treatment of 'culture' can, nowadays, escape the propositions of the Tartu-Moscow school of semiotics about the textual nature of cultural phenomena. Our stopover at the topic of 'text' and 'textuality', however, is not due to the mere following of the canon. Textual features can be recognised in cartographic works, and also in other spatial representations both in terms of artifacts (e.g. the settlement structure) and mentifacts (e.g. cognitive maps). As a matter of fact, spatial representations (both representing space and in the layout of spatial structures) have been explicitly rendered as texts in the epochs to be examined below. On the other hand, the textuality of such representations roots in the frequent nature of the maps as illustrations to holy scripts. Mental and material textual phenomena, besides sharing analogous structural features, can also be compared in semiosic processes. Additionally, the textualist paradigm will take us to the topic of the both structurally and functionally intertextual construction of cultural phenomena.

Such intersemiosic web of cultural production connects the analysis of culture to the topic of more or less coherent sociocultural units. Thus the textual paradigm is not connected merely with the principles of analysing concrete artifacts, but with a more general view on the development of 'culture' and

'society' in terms of 'structures' and/or 'processes'. As we will see, the 'physical', the 'social' and the 'cultural' become interdependent in epochal terms. The application of the 'social system' will help us to see connections between the structural and the processual aspects of sociocultural analysis, and also the representational value of maps as linked to covert modelling processes. Maps as results of wide-scale social negotiation (social, cultural, material resources) and extensive strings of information transmission bring together discourses on the social, cultural and physical 'contents of the world' that are cohered into 'cultural epochs'.

All modelling inside culture and cultural beings is bound to semiotic reality. Thus all artifactial specimens of mapping are to do with epochal realms. However, we will try to illustrate certain manners and devices that exceed the 'ordinary' and pass over from the oikumenic understanding (and representation) of the world to the utopian one. Artifactial mapping thus connects the rendering of the realms of concrete and abstract reference, and brings the latter to the analytical domain of textuality. Further on, be a given representation of the world of communally agreed or inventively proposed structure of the world, we nevertheless can semiotically get clues to the semiosic habits of an epochal or trans-epochal community.

The title of the current work includes a reference to some propositions to be made for a sociosemiotic approach to the analysis of culture and sociocultural phenomena. As it will be argued, on the one hand contemporary semiotics has developed into the stage of dissemination or even dissolution into quite specific so-to-speak subsemiotic trends that are dedicated to very particular individual research objects. On the other hand semiotics does not seem to have reached a stadium of coherent and shared understanding of its general theoretical standpoints (cf. semiotics in the curricula of universities). There have been comparisons of the semiotic and semiological paradigms, sometimes resulting in drawing them apart, sometimes calling for the unification of them. The current work shares the latter view, and will refer to some possibilities of including methods of other social sciences to semiotic studies. We shall recall that semiotics, by its original definition(s), has always been a social science, and thus sociosemiotics may be considered as a reaction to the trend of developing object-specific semiotic vocabulary and methods into particularised semiotics in plural. Area– and object-specific methods in semiotics may occur incompatible with each other, making thereby vague also the boundaries of the paradigms of semiotics in general. From another angle, sociosemiotics is an interesting phenomenon as a term applied to very diverse studies in numerous disciplines, and besides examples of tying 'sociosemiotics' to e.g. media analysis, we can meet it as a marker also inside semiotics in fields commonly associated with more traditional trends (e.g. 'sociosemiotics of theatre'). Thus, on the one hand, there seems to be a need to try to start the discourse of outlining the boundaries of sociosemiotics, and on the other hand such trials will probably lead us to understanding this quite numerously and diversely used label as a tautological

one, for all semiotic phenomena are social by nature. It is therefore pretty probable that in the course of semiotics becoming more and more institutionalised, sociosemiotics may lose its purpose as a trend calling for attention to the pragmatic dimension of semiotic analysis. Today, however, it seems that it is of use for pointing out the necessity of studying man and sociocultural phenomena interdisciplinarily both inside semiotics itself, and in the wider frame of other social, possibly also hard sciences. One of the most important factor, thus, is — besides the requirement of involving the informants' statements about the meaningful units they use — trying to study sociocultural phenomena as complex semiotic occurrences not only in the sense of sign systems that are based on natural language, but also in the aspect uniting man as a cultural and a biological being. As we will see, man's semiosic capacities connect these two major facets and put them into an interdependent relationship. Modelling the world is a vivid example to exemplify the possibility to study the conceptualisation of the environment, taking into account also the informants' statements about their reflective process. While we propose such a standpoint for analysis that would involve the thin or formal description of objects, and understanding of the meaning and use of those objects by informants as a clue to the so-called thick description, we can found a way for minimising the influence of the researcher on the determination of the meaning of his/her objects of analysis. Inasmuch as the researcher as a subject is always a part of her/his activity, it is never possible to eliminate her/his influence on the selection of material in the aspect of both objects and informants, and methods applied. Thus we will see that it is probably impossible to ever outline 'semiospheres' or semantically univocally defined entities. However, before man can set the analytic viewpoint outside the semiotic reality, there seems no alternative but to accept the conditional nature of any research.

The preserved *mappaemundi* are, on the one hand, very limited in their number as a sample set, and simultaneously subject to quite firm typification. In the current work there have been selected specimens from the era of the foundation in the of contemporary cartography in the Middle Ages, and some typologically linked examples from more recent times. Additionally there will be used instances that have been considered as landmarks in cartography from the viewpoint of the history of mapping. As the very expression suggests, *mappaemundi* are overtly articulated genre and have a determined object of representation — will help us to see homologies that exist between man's abilities of cognitive mapping as a biological being, and the evolution of the sociocultural tradition of artifactial mapping. Thus, the 'mapping of the world' encountered in the title of the current work does not imply a sociosemiotic theory of explaining the contents of the world through one metalanguage, but rather points at the intentional range of the research material, and at some basic pragmatic requirements for the study of meaningful phenomena. *Mappaemundi* will be our sample material (there will be no pretensions to seem conclusive in

the cartographic history) for the analysis of certain semiosic continuities in modelling the world both on the individual and social level, and era-specific comments on the aim and contents of *mappaemundi* will be tried to engage the pragmatic dimension.

The above ought to offer an explanation for the organisation of the work as reflected in the table of contents. The three main sections of the following will have to do with opening some fundamental themes and possibilities of researching culture and modelling both in terms of the semiotic metalanguage and the material to be analysed. "Organicism and/or Textualism: Catch-22?" as the first main section will treat structural and processual approaches to culture, trying to indicate the relevance of the topic also for the object-level and the logic of the creation of artifactial and mentifactial cultural phenomena. The problem of the semiotic limits for semiosis do not apply only for the 'scientific metalanguage', but also for the cultural autodescriptive discourse. Sometimes these limits have been tried to be analysed via relationships between cultural texts and text-codes. We shall keep the relevant culturo-semiotic view in mind and, adding 'code-text' to 'text' and 'text-code', try to bring the semiological and semiotic traditions closer together through the notions of communication and semiosis as associated with the so-called semiotics of the code and that of signs.

The structural and processual dynamism of sociocultural phenomena, and the relativity of the autodescriptive and 'scientific' metalevels will take us further "Towards a sociosemiotic approach to culture". Contemporary sociosemiotic research angle should conjoin the study of culture and society, or 'parts and people' as holistic entities. It also seems to be a possibility to overcome certain general differences in semiotic and semiological perspectives for studying sign systems. The management of the 'social' and the communality of signs, and the interdependance of the local and the global will take us to the semiosic limits of a semiotic reality and, in a (maybe) roundabout manner, back to the topic of modelling the world from the beginning of the formation of individual *Umwelten* to the logic of representing the known world through established sign systems.

Thus, "Space, culture, representation, and society: Some structural and functional correlations in the worldview" as the third main section of the work will try demonstrate conjoin the above-mentioned topics in the analysis of maps as a concrete database from the formation of the modern representation of the world. We shall see the coexistence and interdependence of several levels of cognitive and artifactial mapping that also tend to integrate sign systems and representative discourses. At the same time, by reviewing some patterns of spatialization of 'culture', we are but to neglect certain traditional ways of understanding the role and status of cartography (so as cut off from the 'artistic' chorography). In an alike manner, the geographic structure, cultural and social contents of the world as having to do with the *mappaemundi* and the respective base of modelling the world in European cultures, we will reach to the topic of

the utopian discourse that, in turn, will demonstrate the unsuitability of some research units in semiotics that have already become traditional (e.g. the semiosphere). The following chapters "From new places to alternative spaces, culture themes and conceptions" and "Discoveries and novel sociocultural units and/or functions inside 'traditional European' communities" will try to show the integrity of the social, physical and semiotic realities of socii. This holistic perspective will take the topic of mapping the world from the textual level to the level of signs, conjoining thereby again the semiotic, semiological and culturological perspectives that will be tried to be demonstrated by the development of cartographic praxis and the evolution of semiosis in culturo-historical maps.

ORGANICISM AND/OR TEXTUALISM: CATCH-22?

The study of culture is always intrinsically semiotic, since it is always about communication. Communication, be it inter- or intrasubjective, is always social. Communication is executed through sign systems and artefacts that are frequently also the outcome of interaction. Therefore it would be natural to consider all disciplines studying cultural phenomena or human interaction as semiotic. At the same time in the field of contemporary semiotics, the founding fathers of which (C.S. Peirce and F. de Saussure) have made no special statement on 'culture' as such, we are faced with a trend that apparently seems to be dedicated specifically to the study of culture. Semiotics of culture, so as developed by the Tartu-Moscow school, has its roots, through structural anthropology and linguistics, in the original context of semiology. Semiology, in turn, shares certain common features with other disciplines of its epoch that studied cultural phenomena, sign systems and society. In a curious manner, cultural semiotics has brought some essential nuances into the study of culture that were apparently already at stake in the late 19th and the beginning of the 20th century, to contemporary metalevel discourse. In the study of culture, the humanities have had to face an overall question in order to arrange their methodological paradigms: is a researcher to approach cultural phenomena as teleologically arranged, is culture an aid-kit to help to satisfy man's survival needs, or even: is culture a specifically humane domain? Answers to these questions are largely of philosophical nature, although on the surface-level they seem to offer methodological solutions for the study of complex semiotic phenomena. In the case of the study of culture in quite different disciplines, cultural semiotics among them, we often meet the transfer of conventional methods that have been developed for a specific slot of culture, to other, sometimes considerably dissimilar and/or wider areas. 'Text' has been such a methodological device for the semiotics of culture. The influence of the construction of paradigms of etic toolkits on the metaphoric basis and the application of textual parameters to emic vocabularies are sometimes exemplified in the tradition of cultural semiotics.

At a most general level, a firm distinction must be made between the use of the notion of 'text of culture'/'culture as text' in cases in which intentionality is ascribed either textual features to phenomena on the metalevel, or to specific creative and interpretive strategies that go for the (apparently) textual principles on the emic object-level. Description of the organisation of culture as a text composed of multiple textual units can be an alias for sketching the logical relations between artifactial structures. This situation radically differs from cases of the ascription of textuality to the use of those structures i.e., to the sociocultural creative and interpretive relations individualised and actualised regardless of the metalevel or the latter's applied versions (cf. Malinowski

1944: 4–6). Cultural semiotics can probably be connected with trials of outlining the structural logic of research objects via the use of the central concept of text (see e.g. Toporov 1995: 259–399), although the very functioning of culture has also been compared to that of the text (generation, preservation, and transfer of information; see Lotman 1990: 11–19). In such cases the 'text' seems to be a possibility emergent from philological fields assisting the organisation of larger and more complex phenomena on the descriptive level. It is probably due to the European trends emanating first from semiology and secondarily from structuralism and linguistics that text has achieved a favoured position as compared with another macro-metaphor, the organism. The organicist approach to both biological and socio-humanistic development, on the other hand, was preferred during the bloom of natural sciences deriving mostly from the ideas of C. Darwin. The turn of the nineteenth and the twentieth century marked the epoch of the triumph of natural sciences, and the period also designated the preference of the description of both natural and cultural phenomena in organicist terms (see Phillips 1970: 413–432). Beginning from the depiction of man as a social being, and humane association as an organism up to viewing greater and larger achievements of civilisation (e.g. cities) as instrumental prolongations of human organism and/or as organic conglomerations, this angle allowed to comprehensively explain the functioning and long-term development, evolution, of the relevant phenomena. Thus the organicist approach to sociocultural objects can be coined as processual (see e.g. Whitehead 1929). However, there is an important difference between the organicism as a methodological bias, and the organicism that connects with the processual view in teleological terms. The latter trends, such as e.g. social Darwinism, combine the organicist ideas with those of evolution and therefore slip away from the purely methodological paradigm of the synchronic analysis. Yet, as proposed by S. Toulmin, we have to make a distinction between the evolutionist and the evolutionary approach. As it was put by Toulmin, the evolutionist approach sees social developments as clues of the Cosmic Argument that are unrolled in terms of programmed inevitability and immanent logical possibilities. The evolutionary trend, on the other hand, follow the line of C. Darwin in the sense of focusing on the social development as adaptation to concrete needs and demands rising from the several dimensions of the environment (see Toulmin 1972: 329). In spite of certain classical treatments of social orders in the essentially evolutionist manner (Spencer, Tylor, etc.), the current work neither shares nor needs to apply hierarchical models to sociocultural organisations and production, and thus what can be kept in mind in the semiotic paradigm in connection with organicism, can be limited to the (evolutionary, at most) processualism.

Seemingly in an oppositional manner, as compared with contemporary largely subject-centred viewpoint, the organicist approach considered the subject as conditioned and dependent on the environs, therefore ascribing importance rather to the process, not the substance, as the fundamental

metaphysical constituent of the world. Yet, on the other hand the organicist view began appearing in artifacts, e.g. in architecture: articulation of V. Vernadskij's, T. de Chardin's, A.N. Whitehead's and others' (largely religious) organicist worldview was connected both with several theoreticians of the nineteenth century (see Eck 1994), and practitioners of the twentieth century (e.g. F.L. Wright, B. Goff and others) who developed organicism theoretically as well (see e.g. Wright 1958).

Thus, in a probably not too paradoxical a manner, the applied aspect connects the organicist *Weltanschauung* with the textual, doing that — at least in the historical perspective — exactly via the religious foundations of worldview and their complex expression. These religious aspects concern both textualism as having its origin in the medieval Christianity, and organicism as represented by, e.g., the ideas of T. de Chardin. Indeed, if following one of the most favoured research objects of early sociological disciplines, the city, the organic nature of a sociocultural phenomenon is revealed in the symbolic function of monumental architecture (on the latter see Mumford 1961). Instances concerning the city are not casual, since the city, together with matters it contained, was what largely shaped contemporary sociology (e.g. Park and Burgess 1969). City-culture was influential for the overall description of cultural phenomena in terms of comparison. The city became into an etalon of determining cultural development ever since from the Middle Ages (the topic will be reckoned below). City's symbolic role as an expression of an organised structure with the background of the dominating verbal culture on even the sociocultural object-level is well expressed by P. Sorokin who describes the Medieval architecture as "Bible in stone" (Sorokin 1992: 430; cf. Lagopoulos 1993: 97).

Whether to follow the textualist or the organicist approach, a crucial distinction to be made is one between a given worldview (or any other object) on the one hand, and the description of it on the other. Metadiscursive organisation of an object according to the textualist perspective has been favoured in the study of culture increasingly since the outline of the general grammar of sign systems principally analogous to language. F. de Saussure first indicated the resemblance of the majority of humane sign systems to that of the organisation of language, and beginning from his doctrinal understanding, especially as combined with the formalist view on the structure of texts (and other cultural phenomena), the textualist description of culture has been in a favoured position in the paradigm associated with the semiotics of culture. Structural anthropology, as represented by C. Lévi-Strauss, in a way established an *a priori* natural metalevel treatment of culture and cultural phenomena that have — as if — been created according to a prior scheme. In spite of the fact that Lévi-Strauss's findings in the structural resemblances between different cultural institutions (e.g. settlement, social organisation, cosmology) can principally be explained by neither the organicist nor the textualist approach in terms of considering intentionality on the object-level, his approach that focused

on structural coherence between different sociocultural institutions became favoured also in the originally linguistic and literary trend later known as cultural semiotics. However, for a researcher there is a great difference between the so-to-speak natural organisation and the one intentionally descriptive or even declarative. The latter cases of intentionality involved in the organisation of the environment according to principles other than purely pragmatic or casual ones are to do with loading a cultural locale with significant background ideological structures. Ideological, social, cultural and other structures crystallised in environmental units by human activity can be of diverse character. In general it is possible to detect two-directional textual functions spatial entities can be loaded with.

First, space can be used for the synchronic description of e.g. the social structure and system of a socium. In C. Lévi-Strauss's studies (Lévi-Strauss 1968) we can witness spatial structures of settlements representing understandings of a socium of its various social divisions like gender, age, labour, marital status, physi(ologi)cal state. Likewise nutrition and food preparation habits could be in correspondence with the structure of a village. The textualist interpretation of such layouts insists on the logical, not sporadic nature of cultural phenomena (for such different views on spatial studies cf. also e.g. Frazer 1968; Parker Pearson and Richards 1997, etc.). From the semiotic, or the semiological viewpoint, if you will, we are to do with similar interconnections that stand between both on the object- and metalevel. Saussure treated language and other sign systems as based, to a large extent, on the crystallisation of the bond between the concept and sound-image of which the sign is composed (Saussure 1959: 11–15). This elementary semiotic (or semiological) crystallisation makes sign systems shared and usable on the social level, and is learned by individuals via socialisation. Lévi-Strauss pointed at the principle of crystallisation on a wider scale where diverse sociocultural spheres and topics can be in structural, often isomorphic, correspondence. Thus the inertia that makes semiotic systems as institutions socially stable and usable finds sometimes embodiment in the organisation of artefacts up to the level of settlement organisation. However, it is important to remember that in spite of the fairly clear-cut outlines of village plans that seem to reflect correspondence between several institutions in a given socium, there can still exist inconsistencies and even contradictions between what can be ethnographically recorded, and the actual meaning of the data for the given culture-bearers. Inspecting Paul Radin's analysis of the Winnebago tribe, Lévi-Strauss observed quite significant interpretive variations amongst the inhabitants: differences in the social position and status resulted in two contradicting cognitions of the settlement plan (see Lévi-Strauss 1968: 134–135). The location of a Winnebago house was related to the social and economic status of its owner, and at the same time the spot of home influenced the cognition of the apparently 'objectively' planned settlement. This outcome is significant, since rather than having to do with the mere process of geographical cognitive mapping it

pointed out certain correlations between the modelling of several sociocultural institutions. Cognitive mapping did not concern only the geographic or other individual dimensions, but set spatial positioning into correspondence with social sentiment and identity. One's location in a village reflected her/his social position, prestige, and status, although the social parameters could influence the wishful position of an informant and thereby also his/her cognition of the spatial identifying structure of the village. Thus it is explainable why in certain socii there can exist a correspondent rigidity between social structure, spatial layout, architectural environment, food storage and processing system, sociocultural institutions beginning from the organisation of life-cycle to knowledge and job segmentation. The formation of lifestyle under the influence of certain formal and relatively stabile structures connects several identification dimensions of an individual into a more-or-less coherent worldview. The latter is stabilised via transmission to following generations, which explains, the other way round, also the constancy of structures in physical environment. It seems that the connected nature of the social and spatial structures, cultural identity and behavioural patterns is not limited to the so-called primitive cultures and their settlements, but can be traced in contemporary megalopoli as well (cf. e.g. the so-called culture of poverty as a sociological concept). Likewise, continuity in lifestyle and habitual environment increased the inertia of worldview (cf. e.g. the anthropomorphic worldview and settlement plan; Lagopoulos 1986).

Second, as a logical continuation of the above, space can function diachronically as a container of sociocultural memory. This aspect has been extensively discussed in connection with settlements of diverse scale. First there can be recalled studies devoted to the village structure in the so-called primitive cultures. Here it is mostly possible to recognise village plans which represent the cosmological views of a given community (see e.g. Lévi-Strauss 1968). In addition to serving, by standing for knowledge about current organisation of the world, as cultural memories, in some cases villages represent also the development of the universe up to its configuration in presence (see e.g. Lagopoulos 1986). It seems that while the latter function of reminding of the cosmogonic development of the universe gradually diminished, cosmological information has been embedded in settlement structure more often in terms both of frequency and time. Cosmological views have made through different transformations in the course of history, but the basic nature of them has favoured the use of the textualist approach to the shape, function and meaning of settlements from villages to megalopoli. One possibility for the transformation of such cosmological views that were built on the natural, physical phenomena, was their replacement by personified structures. In the so-called primitive cultures the anthropomorphic worldview seems to have been connected with general human anatomy, whereas in the so-called developed western settlements anthropological features were often individualised. Nevertheless it is not difficult to recognise connection between the two, for the respective tendency in western cities may be considered as a further

development of 'primitive' anthropocentrism. The anthropomorphism that guided the European architecture of individual dwellings and settlement plan became, e.g. in Nero's Rome, associated with the body parts of the emperor. Nero's Rome discloses another interesting similarity between the 'primitive' and the 'developed' in the aspect of organising larger territories according to the anthropomorphic principle. Cosmological and cosmogonic knowledge had been embedded not only in individual village plans, but also in the spatial relationships between several settlements (e.g. Western Sudanese settlement; Lagopoulos 1986). Similarly was Rome positioned not only on the scale of the city itself, but as an empire, semiotised through the axes that emanated from the urban environmental layout of the emperor's body (see Lagopoulos 1993: 108–116). The anthropomorphic code thus became into a principle that created coherence between several loci and unified them at a wider scale into 'cultural space'. Cultural space can be viewed as a semiotically and also physically more-or-less coherently structured domain which is subjected to centralised maintenance. This coherent unit can sometimes be regarded as a semiotic subject which enters a dialogue with other entities of the same kind: an example can be drawn from Rome's argument with Vatican about the matter which city has to be set to hierarchically higher position (Vatican claiming its status as the Head of St. Peter; see Lagopoulos 1993: 122–123).

Anthropomorphism so as described as an underlying code for the shaping of environment and erection of settlements thus allows to view large cultural phenomena as texts intentionally created for the transmission of cultural memory, ideological or other messages. The example of Rome as a settlement intentionally organised and considered as the centre of an oikumene indicates another tendency in the shaping of cultural phenomena. Namely, it is simple to apply textual description to e.g. culture areas, if reminding of the oikumenic principle detectable also in several cultures other than in ancient Hellas or Rome. The oikumenic principle of organising space both physically and conceptually may be, in general terms, described as concentric representation of the 'cultural' (or the 'own'): the further from the centre, the less places and subjects possess qualities defined through the centre (from the insiders' viewpoint). Oikumene may have diverse grounds for construction, but mostly we can witness the linguistic principles (people being able to communicate in 'intelligible language' are opposed to 'bar-barians') or geographic considerations ('our space' clear-cut from the 'alien' by either political, physical, natural or other boundaries). In wider oikumenes boundaries may also not be very precise, and in such cases it is possible to start distinguishing between oikumenes as culture areas and varying social units of inhabitation (e.g. a politically defined unit). Fuzzy or vague boundaries occur due to linguistic variations (e.g. dialects), daily habits or other nuances as compared with the central region of the given oikumene, and sociocultural groups become definable in terms of the intensity of interaction between individuals.

Both the linguistic and geographic grounds for defining and representing space are, via centralised worldview, tightly connected with religion (both are rooted in the Biblical views on the multiplicity of languages since Babel, or the limited expanse of the 'righteous' space). As mentioned above, the city with its monumental architecture has been rendered as 'Bible in stone', but this is not the only association with ascription of textual structure to space. Beginning from architectural details (adornments, ornaments) to the layout of a city and its relations with others in a cultural space, Bible has often been the text suggesting the organisation of sociocultural phenomena and systems according to specific divine principles. Earthly cities were to resemble their Heavenly Twins not only in Europe and Christian cultures, but also elsewhere (see Smith and Reynolds 1987). Such spaces as representations of collective mentifacts can be regarded as texts created according to a pre-existing text, and sometimes they can form a basis for further textual activity. St. Petersburg serves as a most popular example for the kind, having been described by the term 'Petersburg-Text' which connects several semiotic layers, beginning from architectural connotations to culturally organised behaviour (the 'typically Petersburgian') both in streets and literature, textual conglomeration describable as belonging to Petersburg's semiotic space, etc., etc. Understanding cultural phenomena as basically created and shaped according to a cognitively organised scheme that is embodied in relatively precisely structured artefacts is preferred by the textualists also in the case of cities: "Petersburg emerged as an idea, a city-myth" (Tuljchinski 1993: 146). However, in suchlike an approach it is crucial to make clear definitions of the actual object of study: one can investigate e.g. text(s) written on St. Petersburg, or analyse Petersburg as a text(ual) phenomenon in a certain cultural space, or study of what this text has been composed (cf. e.g. Lavrov 1996; Lotman 1984; Moreva 1994). In this sense a spatial representation (both in the meaning of the subject matter and the genre and materiality of discourse) is a textually treatable matter: on the one hand space and spatial units can be viewed as texts, on the other hand they can be organised and used as texts that articulate or comment on other cultural structures. Suchlike cultural production both represents other cultural phenomena and is often organised according to a pervasive cultural principle sometimes referred to as a code-text (the term to be more thoroughly rendered below). This points at an important nuance concerning the definition of the semiotic status of our research object: namely the object-level can be split into actual texts and phenomena analysable as textual, while both can be individual in their semiotic field and/or comment on the actual topic of study, obtaining thereby a metadiscursive position. Sometimes the descriptive cultural phenomena that are viewed in textual terms, may develop into condensed units compressing a vision of a given cultural tradition by the use of quantitatively limited range of sign-vehicles. In the case of urban wide-scale spatial discourse, it is possible to speak both of cases that are intentionally interpretive in the sense of being created according to a pre-existing plan (e.g. the above described

Rome, or contemporary Brazilia by Oscar Niemeyer and Lucio Costa), and also of cases in which symbolic or textual meaning has been ascribed to things after creation. The latter issue may sometimes be concerned with the interpretation of physical phenomena that have developed so-to-speak organically: J.C. Risingh describes the city of Tartu as its "[...] shape being almost a circle and is viewable as a human heart, and is therefore worth of adoration" (Risingh 1996: 24). In other cases significance is laid upon spatial connotations and associations with an artifact (e.g. the Third Rome, the Eternal City).

Textuality is thus viewable on several levels: one can analyse how a *Weltanschauung* imposes textual ideology on the surroundings in general ("world as text", "life as text"), or analyse a worldview in textual terms, or analyse diverse representations of a worldview as texts (from written texts to rituals, verbalised myths and artefacts). In order to understand the features or parameters that would enable the application of textuality to different sociocultural phenomena, it is obviously necessary to refer to the context most often associated with extralinguistic treatment of texts. Following the tradition of cultural semiotics and approaching culture as a system of texts, we can distinguish it from nature according to the principle(s) of the textual. This means that the instrumental opposition 'nature – the textual' draws a line between the 'illegible', 'unintelligible', 'hardly interpretable' on the one hand, and the 'legible', 'intelligible', 'interpretable', on the other. Relations between these spheres may be characterised from two different angles. First, we may analyse them within a single domain or phenomenon. This option could have been used also in our context. For example, we could have observed the manifestation of nature in the city as a concentration spot of the 'cultural'. In a historical perspective, this would provide us not only with a picture of a materialised 'nature–culture' relationship but at the same time and — even more interestingly — it would elucidate a society's conception of the 'cultural' and how it has, at different times, been sharply distinguished from the 'natural' (e.g. city-wall in the Middle Ages as a military construction, on the one hand, and on the other, an establishment to keep out the 'savage', 'natural' and 'devilish', and to set all the latter apart from the 'cultivated'). A counter-example is embodied in the emergence of the park into urban culture. This illustrates approaching nature via the garden of Eden, and an attempt to sense culture via nature as the substance of the divine (see for example Larsen 1994; Svirida 1994).

Text, text-code and code-text

Within cultural semiotics the concept of text has been defined and redefined many times (for a general overview of the notion see Lotman 1970: 65–72). The diverse semiotic and communicative functions of text in culture and in cultural tradition — for example, as a container, a generator or a transmitter of

information (see, e.g., Lotman 1981) — have made the position of the text relatively fluid on the semiotic metalevel as well. Indeed, even the very essence of text as an (artifactual) object is difficult to grasp. Different conceptions of the text as a cultural phenomenon have usually been strongly coupled to particular conceptions of the relation between culture and its exterior. This relation is often treated as separation of the text from the non-text. A general culturo-semiotic viewpoint as represented by J. Lotman, suggests "[...] understanding of the text as any individual message the distinction of which (from the 'non-text' or 'another text') is intuitively cognised with sufficient certainty". This implies that "[...] the text possesses a beginning, an end, and a definite inner organisation" and this allows, along with other features, the creation of a typology necessary for an adequate deciphering of texts (see Lotman 1966: 83–85). The three main features or aspects of the text, which have been described by Lotman using the terms 'expressed', 'bordered' and 'structured' (see Lotman 1970: 67–68), come together by virtue of a general property of the different dimensions of the text: their confined or circumscribed nature. For the emergence of text into ontology, it has to be demarcated (see also Lotman 1966: 83–85; cf. Merrell 1982: 6–30). Demarcation, in turn, implies the creation of a unit that is self-reliant in its relation to the environment and describable through an integral structure that makes it 'definable' from the diversity of the surroundings. Thus, the text comes into being, or more correctly – is made to come into being – in the field of tension between at least two different spheres, or in the intersection between at least two systems of different semiotic structure. Indeed, it would otherwise not be semiotically intelligible: the existence of at least two different incongruent or asymmetrical realms is needed for the emergence of a semiotic structure, because – as stated in one of the most widespread elementary and common-sense understandings of the sign – 'the sign stands for something that the given sign is not itself' (cf. C.S. Peirce's definition: "A sign, or representamen, is something which stands to somebody for something in some respect or capacity"; CP 2.228).

Such semiotic dualism is also connected with the dynamic nature of the text that arises, on the one hand, from the structured organisation and, on the other, from a certain inner instability. By inner instability of the text as a semiotic structure we refer to the potential of (above all, artistic) texts to maintain and, especially to generate meanings that are not simply due to a diachronic change of relationship between a text and the cultural environment, but arise also from the text's inner duality. This inner duality includes the text's capacity to contain different (autonomous) subtexts (see Lotman 1982: 3–4) that is made possible by (at least) double coding executed at the production of a text (see also Lotman 1981). Here becomes evident a fundamental difference between the textualist and organicist view upon society and culture: we are to take into consideration also the overall context of the production and interpretation of sociocultural phenomena as having to do with the differentiation between the 'own' and the 'alien': we obviously have to do, at least in an implicit or covert manner, with

the formation of a kind of conceptual 'other'. Consequently, when dealing with the theme of the creation of the, as one might say, intentionally cultural phenomena, so as differentiated from other (meaningful potentially meaningful or not meaningful) discourses, we meet the need to roughly distinguish between two realms: (a) the 'cultural', which refers to a semantically or meaningfully structured domain, and (b) the 'natural', as an unsemiotised or non-meaningful sphere from a viewpoint inside culture. Thus the textual nature of sociocultural phenomena and their semiotically dynamic essence is, as already mentioned, connected with the fact that these entities have been constructed by the application of manifold codes. The hierarchy of codes contained in texts ought to, in turn, make it possible to create a typology of texts (see Lotman 1966: 84). Therefore, the functions of texts in culture, which are related to the respective construction codes, are to be in connection with the specific characteristics of coding in general, both upon the construction and interpretation of cultural phenomena. It has to be stressed that the disclosure of the semiotic essence of objects is immanently bound to the (cap)ability of a researcher to probe into these codes. This is exactly the point separating the textual and the organicist approach both in terms of metalanguage and possible range of research objects.

Whereas it is obvious that the textualist approach to sociocultural phenomena presumes the existence of certain underlying codes for the construction of cultural texts, there must be clarified the essence of those codes, since it is exactly the point determining the semiosic range of artefacts for a researcher. In the culturosemiotic tradition we find manifold notions that have been exploited in order to explain the construction of texts — code, language, grammar, actual grammar are some instances that stand for regulations determining the structural possibilities of a text. However, it is difficult to make a clear definition of such terms, since at places they may be used for reference to strictly the (trans)formational rules of a sign system (e.g. 'language of a socium' — Uspenskij 1974: 119; 'code' — Lotman 1973a: 236), while at places the stress seems rather to be on certain fundamental semantic aspects ('grammars of culture' — Lotman 1973b: 4–5), and at still other cases syntactic rules and the so-to-speak deep semantic structures have been combined ('grammar of text' — Nikolaeva 1973: 152–153; '[behavioural] grammar' — Zoljan and Černov 1978: 155, 162). On the level of culture and integration of diverse sign systems inside a culture, there arises an interesting nuance in connection with the varying definitions of the deep and surface cultural structures: is a semioticians to look for cultural regularities and structures as based on certain meaningful units, or as founded on norms for using these units? Furthermore, Lotman's notion of 'cultural grammars' on the one hand, and his 'text-code', on the other, bring along questions about the relations between the object- and metalevel. Namely, the suggested understanding of 'cultural grammars' connects metalevel to the "[...] composition of autodescriptive texts of the metacultural level" that are "[...] composed by culture for describing itself" (Lotman 1973b: 5). Inasmuch as autodescriptive

texts are constructed by the use of varying grammatical principles that follow certain 'over-cultural' norms, these grammars are to follow certain culture-specific semiosic habits. Additionally, such cultural practice seems to be both purposeful, intentional and conscious.

'Text-code', on the other hand, can be understood in the two main rough aspects of intertextuality: on the one hand there are semiotic structures, such as meaningful units, textual strings that circulate in cultural production and are recognisable as more or less constant. On the other hand, there exist textual procedures used for organising texts in the manner that has been in practice in preceding epochs. Without paying attention to nuances connected with the switching of existing textual structures into novel contexts or genres (e.g. parody), the combination of such structural and functional intertextuality seems to be the background for the notion of text-code as well. Namely, according to Lotman, the main feature of the text-code is that it:

> "[…] is precisely a text. It is not an abstract set of rules for constructing a text, but a syntagmatically built whole, an organised structure of signs" (Lotman 1992: 150).

Text-code (e.g. Bible, epic texts and the similar) is thus an ideal text that is partially embodied in representational cycle through structural or functional intertextuality. Comprehended this way, the text-code seems to connect to the grammar-oriented type of culture in which "[...] text is given to a collective prior to language, and language is 'computed' out of text" (Lotman 1992: 150). Code-texts may or may not be (partially) embodied in a text-code. If we take Middle Ages as an example, it probably can be agreed upon that the medieval cultural dominant was religion. Thus religion, together with its literary, oral and pictorial genres, may be called the code-text of the Middle Ages. In this sense the medieval culture was of the so-called grammar-oriented type. However, practical analysis and several discrepancies between the notions of the text-code and grammar-oriented cultures may bring forth difficulties at trying to define the text-code in any other sense but as a kind of conditional ideal type. For example, when stopping at the case of Bible as probably one of the most frequently used item in the intertextual fabric of European culture, and paying attention to the religious accents of the Middle Ages, there are several points suggesting revision of some standpoints of the textualist technique of cultural description. A most evident dilemma at trials to define the medieval text-code is whether to do it in terms of an individual artifact or a culture topic. Both possibilities in a way allow to call the medieval culture a grammar-oriented one, whereas considerable discrepancies emerge between text-code as a clear-cut artifact and/or a more vague culture topic. Namely, multiple medieval works and genres reveal that their primary function was not even to interpret the Bible (and certain 'self-made' works by men of clerical importance) but to simply re-articulate it/them (sometimes in a purposefully uncomplicated manner). Thus Bible contained the medieval ideal culture, but due to its origin there were no

attempts necessary to be made in order to univocally determine the meaning of Biblical texts or to obtain concrete instruction for the quick progress of social and cultural life. Bible was a text in a narrow sense of the term, whereas the culture surrounding it can be viewed as a text-code through which cultural circumstances were continuously reproduced, unifying thereby the cultural tradition by relatively limited number of criteria and strict norms. A supportive example can be drawn from the cartographic depiction of the world in the medieval epoch of which St. Isidore has been reported having applied the T-O diagram of mapping without originally relating it to the explicitly religious division of the Earth between Shem, Japhet and Ham (see Williams 1997: 13). It is important to note that the paradigm of Christian religion took the position of such code-text that regulated cultural production in both structural and functional manner: intertextuality worked both inside the literary field and unified intersemiosically different culture genres in terms of topics and ways of representation. Hurrying on ahead to a topic to be dealt with later, we can refer to the long-lasted religious tradition of depicting simultaneously the planet, culture, and the known world in the cartographic genre (hereby it is important not to relate the distinction between cartography and chorography to the medieval ages). This tendency is certified by the preserved stock of cartographic heritage (see Codazzi 1947–1949): one can find maps — especially worldmaps — primarily as illustrations or commentaries in religious, or in some cases also in literary works. Some of the most well-known examples in this respect are *Etymologiae* by St. Isidore, *Historiarum adversus paganos libri septem* by Orosius, commentary on the Apocalypse by Beatus, and other eminent works similar in their representative and reproductive (or reifying) function. A general feature of suchlike pieces was being verbal and/or pictorial illustrations to biblical texts. At the same time it important to keep in mind that, be them the so-called T-O worldmaps, maps including the Fourth Continent, or other seemingly incorrect representations of the geographic environment, it was neither a result of shortage in mapmakers' knowledge nor outcome of univocal illustration of verbal texts. A double divergence of representation of the world and knowledge of it can be noticed especially in connection with the invention of the Fourth Continent: on the one hand the stock of geographical information most probably exceeded what can be witnessed in ancient maps, on the other hand maps included inventive details not directly referred to in biblical texts. Therefore it is doubtful, if one could argue that Bible can be regarded as the text-code which structured European culture, being thereby "exactly a text", and "not an abstract set of rules for constructing a text" as the text-code was characterised by Lotman. Religion, the dominant of medieval culture, can be connected not merely with a set of written biblical dogmas or the similar which would make Bible into a formal text-code, but with a paradigm that enabled to articulate and follow the given ideal. While the majority of the medieval cultural phenomena can be viewed as instruments of religion, this fact does not necessarily indicate efforts to find a so-called cultural grammar, because the use

of religious code-text, including its intersemiotic translation into other means of expression, can probably be understood as a cultural automatism that does not demand conscious intentionality. Suchlike presentation of cultural and environmental phenomena through the religious prism as 'natural', doubtlessly implies the ideologization of discourse(s), but at the same time also shows that a socium which, in a manner of speaking, departs from a 'text', does not necessarily have to strive for finding a certain 'grammar', since the latter simply lacks a purpose: creation of artifacts and other cultural phenomena in such culture does not presuppose conscious reflection upon the construction rules of the original text-code of the cultural tradition. All the more — these construction rules were the ones to form the most sacred nucleus of culture that was neither comprehensible nor rationally achievable to man; if daring to reflect upon the religious 'grammar of culture' at all, it had to be done with respect and questions on possible contradictions. Therefore, the original paradigm of the conditional code-text was simply multiplied and reproduced — creation of "new" artifacts, or rather their 'spontaneous' switching into cultural text, together with semiosis in cultural reality is preferably to be described in terms of T.S. Eliot's treatment of cultural tradition. The first test for new texts was their suitability with the existing ones and with the totality of the cultural tradition formed (see Eliot 1973: 12–13), while the whole process must be grasped as largely unconscious (Eliot 1973: 11; cf. Eliot 1992: 21).

Organicism and textualism combined: Semiosis, text, and communication

A question can be set, if the above treatment of organicism and textualism can be combined, or if they are too vigorously opposed to each other. Here we meet at least two aspects that bring the antagonism up: on the one hand there is the question about preferring either structuralism or functionalism on the metalevel, and on the other hand there is vast area touching upon the issue of naturalisation. The latter has to do with cultural texts (beginning from written verbal text to e.g. settlement plans) that present nature as having been created form the perspective of culture or vice versa: a dilemma rises from seeing culture as a 'first-hand divine product' (the case being mostly related to the so-called Western cultures), or nature as the source of culture. The present discourse does not aim at clarifying genetic relations between the two, but it has to be reminded that differences between the instrumental-functional and structural approaches on the metalevel are also to do with assuming a certain genealogical sequence of sociocultural systems as such (on the difference between evolutionist and evolutionary approaches see e.g. Toulmin 1972); the same issues come up at the analysis of worldview and its description. It seems that semiotic analysis can not benefit much from dealing with the more or less philosophical problem of whether culture evolved from nature or vice versa (that, however, extends to the topic of hierarchies of societies), and therefore

there can only be recalled such treatments of the complementary connections between developmental stages of the two that view interaction between man's semiosic abilities and environment (see e.g. Koch 1986). Inasmuch as the present context does not need to stop at the neurobiological semiosic development, and phenomena of nature are on both cultural object-level and metalevel switched into discourse through cultural devices, let us examine some structural and functional connections that lead to the formation of culture as a textual conglomeration. An important aspect in dealing with the topic of a text and the process of its construction is that, if treated in terms of paradigm larger than the usual one of cultural semiotics, by the involvement of also the notion of semiosis, it conjoins several trends in semiotics, showing the actual proximity of cultural semiotics and the so-called Peircean tradition. When talking about the formation of cultural texts, we are dealing with the topic of semiotization in other words, and when viewing regularities of semiosis, we are touching upon the topic of structuring the environs meaningfully. In both cases 'text' and 'semiosis' convene, doing so especially through the notion of communication.

"In pansemiotic perspective, communication is any form of semiosis" (Nöth 1990: 170). For the sake of figurative simplicity, let us briefly and deliberately consider the possibility of seeing the relation between communication and semiosis as a transitive one, while keeping in mind that the terms semiosis, communication, and text attach to both inter- and intrasubjective level. Now we see that W. Nöth's understanding applies well to direct communication between two individuals, but neither to textual communication nor to a wide range of 'unilateral communication' (e.g. the classic example 'smoke $\rightarrow$ fire'). As pointed out by Nöth, 'unilateral communication' suggests rather the definition presented by W. Meyer-Eppler according to whom communication is the reception and processing of physically, chemically or biologically detectable signals by a living being (ibid.). This view is quoted and commented by Nöth as peripheral to the analysis of communication: "Semiosis without any activity on the side of the signal source certainly constitutes the lowest threshold of the semiotic field" (Nöth 1990: 170). This standpoint, in its rearranged form, appears to have two misleading aspects. Firstly, it confuses the relation between communication and semiosis – a more clear differentiation would refer to semiosis as the generation of meaningful unit(s), and to communication as the exchange of it/them. Secondly, it does not seem to be productive to approach semiosic activity as taking place only or strictly between two ontologically different subjects. If we speak of subjects of semiogenetic activity, there is no need for them to be different also on the ontological plane; the emergence of meaning is made possible in the tension field between different semiotic subjects rather than ontological subjects, as suggested by the cases of 'unilateral communication', autocommunication, intracultural communication, etc.

The preference of different [semiotic] fields/spheres rather than different ontological subjects seems to be presented in the tradition of conceiving semiosis as the "[...] process in which something is a sign to some organism"

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(Morris 1946: 366). In this line of thought, the necessary collision between something/someone and 'the Other' does not presume another physical participant in space, but rather a conceptual 'Other'. Along this line, one may even hypothesise that bilateral communication, in its semiosic aspect, is on a fundamental level reducible to unilateral communication and the conceptualisation of the 'Other'. A basic device in the creation of such otherness is, in Shklovskian terms, 'estrangement'. The concept of estrangement (sometimes referred to as defamiliarisation) was revealed by V. Shklovsky as early as in 1917 in a discussion of art where:

> "[...] the technique of art is to make things 'unfamiliar', to make forms difficult, to increase the difficulty and length of perception because the process of perception is an aesthetic end in itself and must be prolonged" (Shklovsky 1994: 20).

This distancing from a phenomenon as part of the process of turning it into (another) object is in correspondence with the general prerequisites for semiosic activity. Here, besides the complementary nature of semiosis and text, we can see a possibility for a unified description of biosemiotic and culturo-semiotic perspectives, be they applied to either natural or cultural phenomena. The description of culture does not presuppose strict choice between organicism and textualism: one could use two conceptually related terms from the biosemiotics and cultural semiotics – *Umwelt* by J. v. Uexküll, and semiosphere by J. M. Lotman. The proximity of the terms brings organicism and textualism closer together not only due to the roots of 'semiosphere' in V.V. Vernadskij's and de Chardin's ideas about 'biosphere' and 'noosphere' that started to develop in 1920s (see Vernadskij 1989 and Chardin 1960). A common principle behind these two terms would provide us with an evident concurrent ground of investigation, thereby drawing attention to the different focus they apply to objects of research, the biosemiotic trend centring on the very emergence of semiosis, and cultural semiotics dealing with further processes toward the 'text' (see fig. 1.).

The elementary common feature describing the semiotic function of the two terms of *Umwelt* and semiosphere is connected with estrangement (or defamiliarisation) in the particular aspect of (self-) identification of a subject for the task of confronting 'the other' both in order to obtain information from the environment, locate itself, and communicate with its surroundings or surrounding subjects, etc. Both *Umwelt* and semiosphere are in their fundamentals formed by a kind of functional circle, as the latter has been described by Uexküll (Uexküll 1987; for an analysis see Krampen 1997; for comparison of *Umwelt* and semiosphere see Sebeok 1998). Topics connected with *Umwelt* and semiosphere, semiosis and communication, organicism and textualism indicate that a unified metalanguage can be used not only for a general bias of description, but just as well for examination of phenomena belonging both to the sphere of culture and nature. Semiotic treatment of nature

and culture can be – and has often been – divided: for example as semiotics of the sign and semiotics of the code, or as semiotics of signification and semiotics of communication. In the tradition of the Tartu-Moscow semiotic school, 'nature' has often been analysed generally as 'non-culture' (see Uspenskij et al 1973). Such a distinction is certainly most arbitrary, and — if taken literally — it indicates an important problem: no communication can be executed without signs. This entails that a semiotics of communication requires a semiotics of signification. Respectively, no signification can emerge without at least two different parties (even though both of them can be called into being by a single communicative agent); so the semiotics of the sign can hardly escape the level of code and that of communication. Again, the position taken on the metalevel determines what to include to the study of culture: the phenomena opposed to culture can be dealt with by the use of an intermediate sphere that is needed for the estrangement of the central position (culture), and for the creation of another semiotic subject via interpretive activity. Thus, besides the impossibility of connecting organicism with a so-to-speak virgin metalanguage, it is hardly feasible to set cultural and natural phenomena into opposition — we should rather consider a triplet 'culture—nature—physical reality'. However, there seems to be little logical justification for such classification of objects, since besides nature, the intermediate sphere can contain elements of another culture or anything suchlike. Therefore today's semiotics prefers differentiation between the semiotised and not semiotised realm, applying the term 'semiotic reality' (cf. e.g. Merrell 1992: 39–40, 44–45). 'Semiotic reality' and the process of constructing it that will be under examination later, is useful not only for the description of different semiosic levels, but just as well as for analysing the semiotic metalanguage in the context of other social sciences. When we talk about nature — or nature as an object of (cultural) semiotics — we usually talk about an interaction between culture and nature on the level of textual meaningfulness, since we cannot, in a provable descriptive manner, intervene with semiosis in nature. Hence to deal with this, we must construe it, basically on our own and by the help of a cultural toolkit. We therefore have to deal with nature as an already 'semiotically accepted' or even interpreted field. Thus, as mentioned, instead of the traditional culturo-semiotic opposition of nature and culture where the position of nature is ambiguous between, on the one hand, an independent existence and, on the other, a meaningful presence in culture — the already 'cultivated nature' hints at a triangle 'culture—nature—physical reality'. Even though in the common and conventional framework of cultural semiotics the component 'physical reality' is usually not mentioned, this does not lead to a contradiction, since the object level of cultural semiotics can be described as confined to the sphere that is switched into cultural discourse and consists of 'cultural units' (see Schneider 1968: 2; the term will be more closely examined below). This background condition is explicitly present in the conception of the semiosphere (Lotman 1984), that claims the impossibility of dealing with 'objective reality', since 'physical reality', which is switched into

discourse, is also included into the structure of the semiosphere. The preference for delimiting the scope of (culturo-) semiotic research to that, which is demarcated by 'culture' and 'nature' — thus leaving out problems concerning 'physical reality' — may have its origins in the tradition of cultural semiotics inspired by Saussure. A Saussurean understanding of the sign entails a dyadic conception: it is composed of the so-called signifier and the signified, both of which are elements of the strictly semiotic realm (even though connected with certain physiological processes). Characteristically, physical reality cannot be dealt with within this tradition, since it can only treat the natural phenomena already subjected to semiotisation. Physical reality and the existence of an objective realm is, in other words, a hypothetical concept 'behind the text' of cultural semiotics. So, if we prefer to exclude the dynamic problems of defining 'nature' from 'culture', we may choose to neglect this binary altogether. This fits into the triadic scheme sketched above that distinguishes between 'culture' as a meaningfully organised domain, 'nature' as a sphere of potential meaningfulness, and 'physical reality' that falls out of cultural discourse but exists as a background hypothetical reality. It, furthermore, grants the so-called semiospherical constructs with the power to create contrasting differences between meaningful entities, and it guarantees the continuity of semiospherical organisations by constantly providing them with new units to be switched into discourse. Thus 'nature' turns into a fluid zone through which new meaningful structures are constructed, and it offers the culturally meaningful sphere possibilities for self-reflection by being a convenient domain for the creation of 'the other'. In this way we may reduce the above triplet, which contains three different spheres, to an opposition between two semiotic entities, where one is semantised and the other is not (such as in the opposition between 'culture' and 'physical reality'), or just 'differently' semantised. Contact between these different realms, or even a certain overlap of them, creates the possibility for the emergence of [new] meaning(s). Such conceptual collision, which may or may not have a physical agent in the environment, allows an outline of some of the following (culturo-)semiotically important stages of text-generation: recognition of meaningfulness → interpretation (making an object meaningful) → textualisation (conceptual structuring of meaning) → texting (textualisation as formal structuring of meaning).
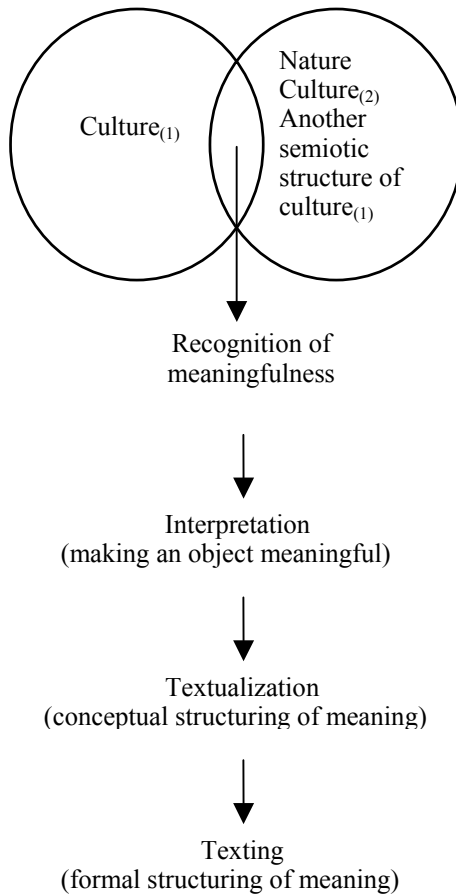
Figure 1. Stages of modelling resulting in texts as artifacts.

Any meaningful phenomenon, in order to be a cultural unit proper (Schneider 1968: 2; Eco 1976: 66, 73–83), has to be demarcated and arrayed, that is, textualised and possibly also texted. It is precisely through 'text' that we can describe the resolution of the original collision, and it is via the 'textual' that we can semiotize the realm outside of cultural units. It is important that the conceptual range of 'text' should not be limited to written records alone: it must just as well be kept in mind that, without possessing formal features of text, cognitive images share similar semiotic features to artifacts. It ought to be conceived as something through which different phenomena can be characterised and described. This conforms to the parameters of textuality (see, for instance, Leavitt 1995 for the textuality and demarcation of oral speech). The 'text' can be regarded as the object of study for cultural semiotics, whereas the preceding processual stages, until the detection of the mechanism for the

emergence of meaning together with its prerequisites, are the target for the analysis of semiosis as creation of meaningful units. Organicism possibly allows to describe the integrated development of phenomena created by man, just as well as their connections with external natural environment. The textualist viewpoint, on the other hand, permits to clearly analyse the construction of concrete artifacts (beginning from a page of a letter to a city), and their semiotic functioning in a specific cultural environment and/or intercultural communication. Consequently in the case of organicism there arises the danger of exaggerated instrumentalism, whereas textualism may reduce the range of research objects by the use of too determined descriptive patterns. In other words, preference of either organicism or textualism is also connected with the setting of the degree of intentional meaningfulness. This, in turn, influences the treatment of an object as either normal, or peculiar and meaningful already by its very existence. At the same time it seems indisputable that in actual analysis the two viewpoints can be conjoined and to thereby make synchronic research (including arrangement of an object at a certain moment, connections of a semiotic system with others at a 'frozen' moment, etc). Additionally, the organicist principle can be applied to the 'natural developments' that have taken to the inspected output of a given semiotic system. It is not difficult to notice that the contemporary semiotic trend unites organicist and textualist approaches concerning both the range of objects (including semiotic systems of different types beginning from conceptions of sign systems found in nature to viewing integration of cultural sign systems), and also taking into account the synchronic and diachronic perspectives.

Semiotic limits for semiosis: metalanguage

The content and limits of culture clearly depend on metalanguage, doing so in several important aspects. First, by metalanguage we delimit the sphere of culture: metalinguistic extrapolations from one discipline or a metalanguage to another, and application of terms developed for research of a delimited set of objects to a novel area, can twist boundaries between different metalinguistic traditions and diffuse boundaries on the object level. Thus one of the most crucial problems that is connected with the determination of the range of culture or other objects for semiotics has to do with metaphoric expressions on the metalevel. Taking into account the above discussion of organicism and textualism, and the problem of nature and culture as objects of semiotics, we can maintain that considering nature as a text is by no means rare in contemporary humanitarian and scientific discourse. This is done when 'textuality' is used as an instrument to explain and describe nature from the point of view of culture, that is, when nature is observed 'as if' it was a text. Of course, the 'as-if-text' premise does not figure as a foundation stone only for

interpretation of biological phenomena, but is used much more widely (see e.g. Taborsky 1997).

Disputes over the justification of the use of metaphors — and the 'as if' premise belongs to this category — find substance especially at the extremes. Analysis of semiogenesis on a microbiological level can be seen as one of these, and it appears to offer an instance of 'comfort' as an important and often elucidating criterion for the description of complex objects. This leads to a discussion about the explanatory and analytic value of metaphoric descriptions. It is, for example, 'comfortable' to view and describe DNA as if it was a text — the relevant 'text' having been composed in a 'language' which consists in the manner how the sequence of nucleotides in the DNA chain (the primary structure of DNA) determines the sequence of amino acids in proteins. But in spite of the comfort of 'textuality' and 'text', we are far from being at ease in making conclusions about their meaning(s). We cannot examine the possible meanings of the 'language' in which, for example, DNA has been composed. Inferences used in genetic engineering do not seem to give ground to describe the field as following semiotic or meaningful rules, rather than those of trial and error and physical or chemical laws. As we are bound to humane semiosis, it is very difficult and risky for us to probe into significative processes in other spheres, let alone to ascribe meaning to these processes. Even if coming to an agreement between scholars about the possible semiotic qualities of a biological entity, it is hardly possible to use any methods of social sciences in order to control those hypothetic meanings, since we cannot intrude into the 'linguistic space' of those spheres.

Having mentioned the accepted value of metaphors like 'language' or 'text' as heuristic extrapolation devices that helped to spread humanitarian discourse to new domains, we have to notice the danger of taking them, so to speak, as metaphor-terms that evoke new kind of conceptions, the content of which has remained paradoxically vague. Vagueness of terms, successively, shrinks the confidence in *what* we actually are analysing as our research object. This aspect leads to another, namely to compensation of vagueness of the conceptual apparatus by the help of diverse research equipment. Attempts to find reassurance from test gadgets are of course more welcome in fields where [natural] phenomena are beyond our perceptual reach or, more correctly, where such phenomena are left beyond our perceptual thresholds (e.g. ultra-violet radiation, ultrasound, etc.). Efforts are made trying to describe them by using a variety of indications or signals attained by the help of specific machinery to get elementary or first-hand data. If we go further we can draw a parallel to analyses of natural 'texts', the 'language' of which remains only indirectly assumable for us. Therefore if we hope to examine any kind of communication based on signals (or also maybe-signs) beyond the threshold of our senses, it is never guaranteed that machinery provides us with meaning or meaningfulness, and not mere physical information (see Russell 1948: ch. 3, ch. 7; Pelc 1992: 33). Thus a vital distinction has to be made between the existence of an entity as

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a sign, on the one hand, and the existence of something as being interpretable as a sign, on the other (see Pelc 1992: 26).

In spite of problems related to rendering biological units on the level of signs and presenting them as being 'textual', it is, however, interesting to point out an opposite semiotic mechanism. This is seen in those social practices where the outcome of neuro-chemical processes are used for the creation of culturally interpretable 'texts'. An example of such a neuro-chemical intentional coding or, more exactly, of inducing a neuro-chemical coding of such 'cultural texts', can be drawn from T. Sebeok's analysis of conscious and unconscious semiotic behaviour. Sebeok's example comes from the inter-war period when it became a habit in Central European social life for women, in order to draw a gentleman's attention, to drop an essence extracted from the plant *belladonna* ('beautiful woman') into their eyes to cause a notable dilation of pupils (see Sebeok 1990a: 66–71). By evoking fashionable norms of beauty in this way, a desired social behaviour was achieved (or at least made more probable).

Concerning relations between culture, text and nature, we can find another instance that hints even more at possible connections between humane intentional semiosis and what can be interpreted as semiosis on the microbiological level. Let us once again turn to Sebeok who develops an example by H. Berg on the 'seeming intentionality' of the decisive behaviour of the ubiquitous prokaryotic bacterium *Escherichia coli*. The 'meaningful aspect' of the bacterium's behaviour is that:

> "[...] it relies on a memory lasting approximately four seconds, allowing it to compare deictically – over short times and distances – where it *was*, with where it *is*. On that basis, it 'decides', with seeming intentionality, whether to tumble (stay in place) or swim and search for another indexical match somewhere else" (Sebeok 1990b: 14).

Further, Sebeok maintains that:

> "It may be pertinent to note that, with respect to their rhythmic movements, the *hic et nunc* that we humans perceive has a duration of three seconds. Poets and composers appear to be intuitively aware of this fact (proved by Ernst Pöppel) when they provide proper 'pauses' in their texts" (Sebeok 1990b: 15).

Returning from the psychophysical background for the construction of texts to the semiotic viewpoint, we can maintain that an entity's meaningfulness, as it is conceived on the level of textual signs and their combinations, can come into being due to the unlimited possibilities of meanings that exist prior to the ascription of a concrete meaning to that entity. This is the cause of the much-discussed dialogism of text. In creating new meanings, a text is in itself dialogical, it is in dialogue with the reader, it switches into dialogue with a wider cultural context in diachrony, etc. Thus the 'universe of meaning' of a text is principally unlimited. These are characteristics that seem risky to apply

to natural phenomena, since we can hardly tell anything about the origin or emergence of signs utilised in nature. It is therefore difficult to assert anything about them as demarcated units, or to say anything about their interpretive limits. Hence we have to admit that nature can be viewed as textual as far as the starting point and the 'as-if' premise is remembered. In spite of these problems, 'textuality' is, however, useful as an explanatory category for attempts to semiotisize nature from the viewpoint of culture. The basic question is: which (elementary) level we can go to, when we ascribe meanings to phenomena belonging to fields in which we lack of a sufficient luggage of interpretive habits? Hence we can suggest that 'texts' may exist also in nature, but for us they do so via our cultural experience. An important difference between signs in culture and nature seems to be their interpretive range: while units treated as signs in nature can be principally subjected to human interpretations that can not be judged as 'correct' (see e.g. Eco 1990), then on the molecular level, for example, the limits of interpretation cannot be too wide or varying, since that would leave the very continuity of species insecure. Regarding the relevant level of 'language', there has been long discussion about that of dolphins, bees, or other 'communal animals'. We can refer to C. Cherry for a suitable contrasting opinion. Cherry, speaking about the topic, classifies the 'language' of the bees as constant and non-changing through generations: "It is not developable, flexible, and universal" (Cherry 1975: 18). Bringing forth another side of the topic, Cherry says that "[...] animal signs can relate only to the future, but never, like human language, refer to the past" (Cherry 1975: 19). Of course, the range of natural languages in nature is unlimited, just as the variability in the ability to learn and extend the scope of tools and units of meaning-conveyance (cf. Voigt 1993). Secondly, connections between the three elements forming the semiotic triangle operate via the comparison of a sign with the existing 'semiotic luggage' of an individual. Only through a comparison with experience can we make inferences about a semiotic structure in — or in the meaning of — a text. Due to this the meaningfulness of an 'X' can be recognised. Here we can allude to H. Münsterberg who said in 1909 that the meaning of reality lies in the expectation it evokes (cited from Ogden and Richards 1972: 171). Consequently, reality cannot be dealt with immediately, but only as mediated by meaning*fulness* or if you will, by the expectation of meaning. The latter idea may also be found in Peirce's concept of the interpretant:

> "In fact, this is habit, by virtue of which an idea is brought up into present consciousness by a bond that had already been established between it and another idea while it was still ***in futuro***" (CP 6.141).

If this is connected with the expectation of meaning, we can see that inevitably, signs and meaning can only be treated through cultural filters.

The second aspect that touches upon the metalinguistic limits of conceiving semiosis, thereby determining culture topics for the descriptive level, has also to

do with correspondence between items and fields of culture, and explanatory equipment. When trying to define the content of 'culture' for contemporary semiotic analysis, we cannot overlook certain aspects in the development of cultural anthropology during the 20th century. It is interesting to notice that European cultural anthropology has had such roots in early sociology and Saussurean semiology that are revealed in structural anthropology. Furthermore, principles of semiology, structuralism and formalism are evident in the parallel development of cultural semiotics. Semiology is important both for structural anthropology and for cultural semiotics, being a factor directing trends in culture studies toward the analysis of sign systems as cognitive social systems. A gradual increase in emphasizing the description of cultural phenomena as outcome of individually (or communally) articulated social sign systems essentially meant approaching those schools in cultural analysis that are associated with cognitive trends in cultural anthropology. Those trends expose a steady movement from the late 19th century description of cultures as sets of artifacts organised according to cultural patterns toward the interpretation of cultures as ideational systems. This means that cultures were not 'made' any more only on the metalevel through the organisation of relations between cultural phenomena in scientific discourse. While cultures can be viewed as 'theories' in Kluckhohn's sense (Kluckhohn 1961) throughout the development of the humanities, an increased attention to them as abstractions existing already on the level of the cultural object has been characteristic of schools analysing cultures as ideational or semiotic systems. Sociocultural systems are reflective systems and the overt behaviour revealed in culture traits depends on the covert behaviour directed by cognitive structures such as image schemata, values, behavioural schemes, etc. Thus, the aim of understanding cultures is to describe them as systems of knowledge, intersemiotic sign systems, reflective systems. Repeating the ideas of the cognitive anthropologist W.H. Goodenough, cultures are sets of decision standards, intellectual forms, perception models, models of relating, interpretation models, preference ratings and organisational patterns (see, e.g., Goodenough 1961, 1980, 1981). For a unified cultural anthropology, these cognitive structures converge into sociocultural systems that have been defined by R.M. Keesing as systems that "[...] represent the social realizations or enactments of ideational designs-for-living in particular environments" (Keesing 1974: 82).

An important aspect of the humanitarian disciplinary development has been widening the scope of study by new methods. R. Rosaldo presents an understanding of the development of ethnographic and social thought as having its roots in the epoch of "the Lone Ethnographer" dived deep in fieldwork the results of which were used by armchair theorists as information storehouses. The period of the Lone Ethnographer, according to Rosaldo, was followed by the classic period lasting from approximately 1921 to 1971, characterised by the

objectivist research program, which viewed society as a system and culture as a coherent set of patterns (Rosaldo 1993: 32):

> "Phenomena that could not be regarded as systems or patterns appeared to be unanalyzable; they were regarded as exceptions, ambiguities, or irregularities" (Rosaldo 1993: 32).

Similarly has C. Kluckhohn pointed out the revolutionised expanse of the range of objects for culture analysis in connection with new methods allowing to explain diverse borderline phenomena, such as e.g. psychoanalysis (Kluckhohn 1961). On the other hand, categorisation of certain phenomena as not representative of a cultural system would principally allow to describe a given system by negation. From this perspective, differences between exceptions, ambiguities, irregularities gain specific significance as methodological possibilities for analysing both the object-level (the so-called wastebasket method) and metalevel dispositions.

The third moment: one of the most discussed and essential aspect of metalanguage is its influence on the whole understanding of a culture or a cultural phenomenon described. Here the very position of the researcher as a member of a certain sociocultural group towards her/his object determines, or at least has determined, understanding of the described object as either simple or complex, developing or developed. The metalinguistic classification of cultures has sometimes, due to the inability to theoretically approach peripheral cultural phenomena in which the major potential for culture changes is embodied, favoured to view sociocultural phenomena as static or fixed systems. Such an understanding especially concerns entire sociocultural systems that are not subjectable to Eurocentric, in C. Geertz's terms, thick description, and gives therefore rise to the distinction between the so-called developed and primitive cultures. Imposition of features to an object of culture analysis can proceed through the actual object of study, a metalanguage chosen, the individual angle of an analyst, presuppositions and expectations of a given sociocultural context and the similar. These aspects can of course form a vicious circle that may continue over several research epochs; e.g. in the case of the above-pointed example of overlooking certain peripheral sociocultural phenomena during the classic period in ethnography, the occasional twist of described objects can be met in some long-lasting metaphoric vocabulary (e.g. 'society as a text', 'culture as a book', 'life as a spectacle', 'city drama'; cf. C. Geertz's treatment of the change of knowledge of a culture of what we want to know that characterises the blurred boundaries between the social sciences and the humanities; Geertz 1983: 19–35).

Fixation of cultures by the so-called thin description has shaped understanding of cultures both in scholarship and its methods, and amongst culture bearers as well. Images of culture spaces, individual cultures and cultural production are embedded in the vocabulary of both science and education system. The latter aspect will be rendered more thoroughly below in

connection with the process of unilateral communication and unilateral creation of communicative semiotic subjects. One of the most well-known example of creating cultural differences in terms of 'the developing' and 'the developed' comes again from cultural anthropology. It is interesting to notice that while a common approach to developing cultures ascribes them irrationality, mythical thinking and the similar, sometimes we are faced with descriptions setting members of the so-called developing cultures far away from the sphere of the cultural. The lack of rationality is paradoxically associated with conscious following of established patterns as far as enacted social relations are concerned: spontaneous human compassion is replaced by machine- or animal-like instrumentality. Examples of such biased use of vocabulary can be found in works by several eminent anthropologists: R. Rosaldo has called attention to the force of predispositioned metalanguage that has favoured the emergence of deliberate attitude towards bearers of other culture, bringing A.R. Radcliffe-Brown and C. Lévi-Strauss as illustrations (Rosaldo 1993: 52, 59). For the explication and exemplification of Kluckhohn's understanding of the paradigm of 'culture', let us recall the excerpt from *The Andaman Islanders*:

> "When two friends or relatives meet after having been separated, the social relation between them that has been interrupted is about to be renewed. This social relation implies or depends upon the existence of a specific bond of solidarity between them. The weeping rite (together with the subsequent exchange of presents) is the affirmation of this bond. The rite, which, it must be remembered, is obligatory, compels the two participants to act as though they felt certain emotions, and thereby does, to some extent, produce these emotions in them" (Radcliffe-Brown 1964: 241).

This instance falls to the group of unilateral semiotisation of the other by the defamiliarisation of the enacting individuals. Being manifest as a 'thin description' expressed in the so-to-speak high scholarly style, it alienates the described people semiotically, psychologically, even psycho-physiologically. In a way it is still an example of trying to deal with the so-called Missing Link, and is thus, on the other hand, also an explanation for why the category of 'developed cultures' became steadily used and not seriously analysed for a long time. Automatic cultural patterns of cultures of Western scholars were considered too natural to be switched into the set of research objects. This was favoured by the use of the vocabulary and methods of 'thin description' which, in a way, made analysis of the 'own' sociocultural context very difficult. The case in point was, for many western scholars in an irritating manner, brought to acute debate by H. Miner in his shocking parodic essay famous for its backward spelling of the 'American'. In "Body Ritual among the Nacirema", Miner describes habits of the 'Nacirema' in high terms of classical anthropology, wanting to show them "[...] as an example of the extremes to which human behaviour can go".

Miner reported on some of the body-rituals of the 'Nacirema' as follows:

> "One has but to watch the gleam in the eye of a holy-mouth-man, as he jabs an awl into an exposed nerve, to suspect that a certain amount of sadism is involved. If this can be established, a very interesting pattern emerges, for most of the population shows definite masochistic tendencies. It was to these that Professor Linton referred in discussing a distinctive part of the daily body ritual which is performed only by men. This part of the rite includes scraping and lacerating the surface of the face with a sharp instrument. Special women's rites are performed only four times during each lunar month, but what they lack in frequency is made up in barbarity. As part of this ceremony, women bake their heads in small ovens for about an hour. The theoretically interesting point is that what seems to be a preponderantly masochistic people have developed sadistic specialists" (Miner 1956).

This is a bright example of the problem of scientific vocabulary, and touches upon practically all meanings the term 'culture' that can be ascribed from the structure created on the metalevel to the one influencing human biological and psycho-physiological behaviour. By metalanguage, cultural norms can be swapped with individual habits, biological processes, emotions, etc. (e.g., using the above example from Radcliffe-Brown's work by 'thin description', we can talk of 'natural', 'obligatory', 'conventional', 'induced', 'standardised' grief on the basis of the same observation). The seemingly innocent metalanguage can be applied to the depiction of the syntactic structure of a culture or any other object, and formally we would as if have to do with what Geertz called thin description in anthropology. The above examples of ideological objectification of culture and behaviour, however, demonstrate that in practise such 'thin descriptions' can switch into paradigms of humanities as pseudo-thick ones which already aim at the explanation of the semantics of objects.

Culture: Structure or process?

The above discussion tried to examine the influence of the overall disposition of a researcher to her/his objects, and it hopefully was exemplified that there is no immanent need to choose positions in terms of textualism or organicism for the inspection of neither cultural nor natural phenomena. Nor must metalanguages of sciences and humanities be rigidly separated (e.g. for individual study of semiosis in nature or culture), but one rather has to be most careful about metaphoric description, just as well as about making strict difference between signs and entities interpretable as such by a researcher as signs.

Since 'culture', for contemporary semiotics, has its roots largely in Western cultural anthropology, it is worthwhile to pay attention to the question that has prevailed in anthropology during the past decades: how is culture itself to be studied in terms of principles of its construction. In cultural anthropology, similarly to the dilemma between text and instrument, the object of study has

been either the structure or process of society/culture. The distinction has been regarded as especially acute at the beginning of modern sociology (for a discussion see e.g. Rosaldo 1993). 'Structure' and 'process' have sometimes been equalised with 'structure' and 'agency', or material and ideational aspects of social life (e.g. Archer 1996: xi). Today it is clear that these aspects are complementary; all the more, the need for simultaneous inspection of the structural and processual aspects of research objects was maintained already in the semiological paradigm by F. de Saussure who claimed the synchrony and diachrony of sign systems to be the objectives of semiological analysis (Saussure 1959).

Choice between culture as either a structure or a process, is of course another wording for the question whether to study certain cultural phenomena or human beings in order to be able to describe, maybe even explain, the logic of cultural development. In a way we meet here again the topic of organicism and textualism since, on the one hand, artifacts can be viewed as individual beings behaving in cultural tradition, and biological beings, nurtured humans and bred species, as structures in cultural organisation. However, inasmuch as rendering artefacts as actors, or vice versa, seems heuristically unimportant, we can at the point use the terms 'parts' and 'people' in order to describe interplay between entities constructing culture (see Archer 1996: xiv ff.). This distinction is far from being novel in cultural anthropology: we can find principally alike in traditions trying to describe cultures and their development in terms of culture areas (see e.g. Vidal de La Blache 1926), age areas (Wissler 1923) culture traits and patterns (Benedict 1934), culture bearers. In all these cases we meet several important connecting points that help to describe relations between environment, social groups and cultural phenomena. These relations will be discussed below in connection with defining social groups from cultural ones, but they also bring along the topic of integration that has been discussed at length in both early sociological tradition (e.g. Sorokin 1957), and also in recent socio-anthropological theory. Patterns and principles of integration are important for the explication of methods by which a research object is constructed — both cultural and social units are set into meaningful relationships between each other by outlining their integration models. The most general descriptions of cultures and societies entail the distinction between the system integration and the social integration (e.g. Lockwood 1964, Archer 1996) the former of which is based on logical consistency and the latter on causal consensus (Archer 1996). Such a distinction between culture and society is of course arbitrary, and cultural and sociocultural structures, or structural and actantial aspects, are bound together by interdependence through the mechanism of socialisation. Socialisation binds normative behaviour with cultural values that influence individual views on gender, ethnicity, ethics, religion and other ideologically loaded sociocultural constructions. Socialisation thus has a crucial role in brining individuals from spatial integration to the level of logico-meaningful integration (Sorokin 1957, ch. 1.). Sociocultural integration,

however, depends on the structural mechanism of culture maintenance, and is thus guided by power relations and censorship hiding or highlighting certain cultural structures or possibilities of sociocultural networks. On the other hand, what may seem as inconsistencies in cultural system, may be subjected to social amendment or elaboration by social movements. Changes in both social and cultural morphology are thus mutually conditioned.

Archer has maintained that culture can be defined from two possible angles: the descriptive and the explanatory, neither of which, though, have been successful (Archer 1996: 1). While Archer relates her treatment to sociological theory, one can find objections to her standpoint from several trends and authors. It is probably possible to explain Archer's scepticism by the more or less simultaneous convergence and divergence of social and humanitarian sciences during the period beginning from the end of the 19th century up to approximately the first third of the 20th century. On the one hand that remarkable time of the emergence of contemporary disciplines had to do with making decisions on the actual objects of humanitarian study: put roughly, fields tended to be associated with either human beings, their organisations, their artifactual production, or their interpersonal communication systems. By and large these four focal points could be approached from angles centring at either external or internal behaviour. The methodological dissimilarities connected with the latter choice hint at the goal of study in terms of aiming either at regularities of individual behaviour or structure of an organising system behind the so-called overt behaviour. While these problems concern all sciences of man, anthropology as 'the most traditional' can be exemplified by B. Malinowski's (1944: 4–6) notifications of problems pertaining to the different facets of culture study (see table 1).

Ethnographic field-worker	Observation of the essential	Present the culturally relevant
Physical anthropologist	Measurements, classifications, descriptions of physical type	Correlate physical type with the cultural creativeness of a race
Prehistorian and archaeologist	Partial evidence confined to material remnants	Reconstruct the full living reality of a past culture
Ethnologist	Evidence of present-day primitive and more advanced cultures	Reconstruct human history (evolution or diffusion)

Table 1. Anthropology: stages and tasks after Malinowski (1944: 4–6).

Malinowski claims that:

> "[...] the scientific quota in all anthropological work consists in the theory of culture, with reference to the method of observation in the field and to the meaning of culture as process and product" (Malinowski 1944: 5).

These stages of anthropological research demonstrate the need for an overall understanding of 'culture' in order to create correspondence between the different aspects of anthropology, and to bring results of different studies together at a higher level. Thus Malinowski does not seem to be concerned with merely anthropology, but with 'the Study of Man in general' that would comprise all the social sciences (Malinowski 1944: 6). Such a standpoint is derived from the opinion that all human activity has been integrated at the reflective level all through history, since all communicative action is based on a socially shared view of the world and the semiotic reality. What differentiates such (implicit) knowledge from scholarship proper is the minimum definition of science which:

> "[...] implies invariably the existence of general laws, a field for experiment or observation, and last, […] a control of academic discourse by practical application" (Malinowski 1944: 11).

Theoretical standpoints assist to organise the items observed, and at the same time empirical data help to confirm or reconsider theoretical constructions. Practical application of sociocultural regularities and mechanisms discovered implies the role of the Study of Man in actual social engineering, requiring thus the involvement of various disciplines that are usually considered independently. The combination of dissimilar disciplines may sometimes involve such methodological transfers that end in radical transformation of the object of study. This is frequently exposed at cases claiming not to study an X, but *X as Y*: as mentioned above, such metaphorical angles can often bring along idiosyncratic understanding of an object by a given researcher. However, it would probably be useful to distinguish between certain basic tendencies in attitudes to the overall structural nature of culture and society in general on the one hand, and the employment of methods originally designed for the analysis of very specific items. Additionally, from the perspective of semiotics, the merging of methods and objects of dissimilar origin in their disciplinary affiliation can alter the so-to-speak location of meaning (e.g. the city "is certainly not a 'story' *because* it is by nature a text", "the city speaks to us"; Ledrut 1986: 117, 118). Instead of helping to explain the individual essence of sociocultural phenomena, commitment to metaphoric metalanguage rather evens out structural and semiotic nuances and relationships between items of social and cultural organisation. However, putting the above into other words, the analysis of sociocultural phenomena in etic terms ascribes them certain phenomenological status, and more or less delimits also the set of features detectable from an interior viewpoint, trying to follow emic description.

Therefore it is understandable why, in culture research, metaphors have often found exploitation both in concrete analytic methods and general attitudes of explaining the phenomenological status of sociocultural items.

One of the most valuable clarifications of standpoints in cultural anthropology, which is elucidating also for conscious reflection on the metalanguage of other humanities, was presented in C. Kluckhohn's above mentioned popular book *Mirror for Man*. The aspects that have to be taken into account in culture analysis in relation to both the object- and metalevel influenced cultural anthropology maybe even to the extent where one can start talking about so-to-speak semiotic cultural anthropology (represented by e.g. Geertz). Kluckhohn presented the idea of culture as a mentally constructed, behaviourally and cognitively organised structure that has about a dozen aspects to be paid attention to: culture is the total way of life of a people, the social legacy the individual acquires from his group, a way of thinking, feeling and believing, an abstraction from behaviour, a theory on the part of the anthropologist about the way in which a group of people in fact behave, storehouse of pooled learning, a set of standardized orientations to recurrent problems, learned behaviour, a mechanism for the normative regulation of behaviour, a set of techniques for adjusting both to the external environment and to other men, a precipitate of history, a behavioural map, sieve, or matrix (Kluckhohn 1961: ch. 2.). These aspects may probably be brought together in a statement that defines culture as an institution: culture is an organisation that contains several sub-institutions (e.g. sign systems) that are used by institutions (society, social groups) that, by active use, shape culture. Kluckhohn's views make also explicit that culture research has to concentrate on certain fundamental levels and areas of semiotisation: connections between culture and external environment, man as a biological being and a cultural entity, the semiotic reality of man and sign systems that allow to construct and express it. These topics hook up with the major issues of semiotics, all the more — they indicate that culture research has to include combined approach to cultural phenomena in terms of unifying the Saussurean and Peircean semiotic paradigms. On the one hand we have to analyse relations between sign systems and environment, using the triadic sign conception, and on the other hand culture research must concentrate on relations inside and between sign systems themselves, basing itself on semiological ideas. In an interesting manner the methodological standpoints of semiotics and semiology bring sign theories and cultural anthropology together in a roundabout way. Namely, it is difficult to find any definition of culture at the sources of contemporary semiotics — neither C.S. Peirce nor F. de Saussure seem to have spelled it explicitly out; at the same time it is possible to deduce such semiotic definitions from their treatments of sign systems culture is built of. Saussure and Peirce are forefathers of contemporary treatments of communication systems in the aspects of the structural models of interaction (e.g. the speech circuit and its crystallised institutional basis) and the processual ones (e.g. development from

the semiosic Firstness upwards). Through the communication schemes and logic of semiotics (and semiology) we can see that there is no heuristic use in trying to set an analytic perspective according to either textualism or organicism and that, in more modern and general terms, structuralism and processualism are not to be dealt with as mutually exclusive alternatives. At the same time, while structuralism and processualism are more of the character of metalevel notions, the textual and organicist principles of the construction of artifacts of several levels can be found in the autodescriptive discourse of cultural production itself. Consequently the sociocultural logic of the creation and communication of meaningful units up to the complex associations such as worldview, must be searched from the pragmatic angle of semiotics. Relations between the sociocultural meaningful reality and the segments of the 'outside reality' not overlapping with it can be studied through texts as the outcome of the process of the above-described stages of text-generation, whereas it must be remembered that the analytic features of the 'text' in the wider sense of cultural semiotics depend not only on the metalevel, but also on the understanding of the descriptive logic by the creators of the material analysed even more importantly. Thus let us try to protrude into possibilities of the description of the 'semiotic reality' as connected with the sociocultural autodescriptive discourse. The following sociosemiotic perspective is, amongst other considerations, also to unite the several stages of culture research as presented by Malinowski. So, besides the re-unification of the semiotic paradigm, today we are but to see a tendency similar to the 'unified science' of the beginning of the 20th century.

TOWARDS A SOCIOSEMIOTIC APPROACH TO CULTURE

It has become a commonplace to distinguish between different areas of semiotics by the objects of those fields. Notions like 'semiotics of literature', 'semiotics of advertising', 'semiotics of space', 'semiotics of music', etc. are often used according to such logic that as if presumes that all of a sudden a new range of objects has appeared, or, vice versa, sociosemiotics has as if arrived belatedly at the "Great Delivery of Objects", and thus must find something new to study in order to justify its existence. It seems necessary to explicate why these possible understandings are incorrect and to propose ideas concerning rescuing the currently fuzzy discipline of sociosemiotics from its present vagueness. The solution will probably influence the unwritten principles of dividing the general semiotic field as well.

To begin with discussion on the term 'sociosemiotics', we should not constrain ourselves with the mere distinction between Saussurean semiology and Peircean semiotics. Rather, their influence on the emergence of e.g. cultural semiotics, biosemiotics, etc. should be observed. As mentioned above, in the contemporary semiotic discourse it has become common to distinguish between different 'subsemiotic' disciplines according to the objects dealt with (e.g. the general situation in semiotics as currently concerned with to three main fields labelled as cultural semiotics, biosemiotics and sociosemiotics). The structure of these fields is organised according to a more subtle differentiation between research objects (e.g. in the general area of cultural semiotics we can find literary semiotics, semiotics of theatre, semiotics of advertising, cinema, etc.). There are virtually no limitations to the branching of semiotics in this manner and therefore we can even come across such terms as semiotics of traffic signs (e.g. Krampen 1983) or steam iron semiotics (see, e.g., Vihma 1995). Such tendencies of 'refrigerator semiotics' that at least partially freeze holistic semiotic methodology can possibly fragment the domain of semiotics into extremely minute fields that hardly can be regarded as independent disciplines. Thus these proposals seem confusing, especially at a time when semiotics is becoming more and more institutionalised (e.g., wide variation in organisation of chairs in departments, programs and curricula), which presupposes at least some common understanding of semiotics as a unified discipline that should be comparable to areas with a longer history of institutionalisation that is manifested on a scale ranging from relevant text-books to organisations. Furthermore, the *ad hoc* labelling of 'subsemiotic' disciplines according to their objects does not seem to be grounded due to their intrinsic inseparable nature (e.g., it would hardly be fruitful to study semiotics of theatre, not paying attention to, for example, the latter's literary or artistic aspects). Unified

understanding of the semiotic paradigm is thus essential already from the educational point of view.

Another way to create a division of the 'subsemiotic' branches of research would be to follow the logic of information channels (e.g., the optical channel; see Landwehr 1997, the acoustic channel; see Strube and Lazarus 1997, the tactile channel; see Heuer 1997, etc.). Also terms like 'visual semiotics', 'semiotics of space' and the like point at the possibility of differentiating between objects on the basis of the channels of human perception by which the world is turned into signs. However, it is doubtful that these channels can be actually studied separately (see, e.g., Krampen 1997). Also, different areas of semiosis have been articulated that lead to, and are included in, the cultural processes of anthroposemiosis: microsemiosis, mycosemiosis, phytosemiosis, zoosemiosis (see Wuketis 1997).

Sociosemiotics — a term relatively frequently used in contemporary semiotic discourse — is a recent development in semiotics. However, when we attempt to delimit its field, we meet a puzzling situation: there hardly exists either any clear-cut definition of the theoretical paradigm of sociosemiotics, or any outline of the range of its genuine objects. Amongst the very few existing definitions of sociosemiotics we can refer to the one by A.P. Lagopoulos and M. Gottdiener who state: "[...] sociosemiotics is materialistic analysis of ideology in everyday life" (Gottdiener and Lagopoulos 1986: 14). This approach, however, seems to be both tautological as well as 'too materialistic', since in semiotic analysis we can escape neither from the everyday life and consummation of signs already at the stage of collecting data (see, e.g., Danesi and Perron 1999: 293ff), nor from the necessarily pragmatic angle of semiotic studies (see e.g. Morris 1971: 43–54). Furthermore, it is apparent that all sign systems are inevitably ideological by nature and that this is revealed in our everyday behaviour through the transformational rules guiding overt behaviour. Laying their stress on the aspect of ideology may have evoked Gottdiener and Lagopoulos to distinguish sociosemiotics from the so-called mainstream semiotics by associating the former with analysis connotative signification connected with ideological systems (Gottdiener and Lagopoulos 1986), but it seems there can be hardly found a cultural phenomenon in which denotative aspects were deprived of the connotative codes.

Sociosemiotics is a topic often considered with caution and left undefined, although at the same time the term appears in the titles of numerous publications (e.g., Halliday 1978; Hodge and Kress 1988; Alter 1991; Flynn 1991; Riggins 1994a; Jensen 1995; etc.). Thus, if we use the notion at all, the first task to be completed is the clarification of the boundaries of sociosemiotics. To do this, the historical developments of the humanities are to be considered, especially as these converge, crisscross and diverge during the tense period at the turn of the 19th and 20th centuries. In this perspective special attention has to be paid to (cultural) anthropology, semiology and semiotics, early sociology and other social sciences. The next step would be examination

of the contemporary state of semiotics and reasons for the activation of different 'subsemiotic trends' as related to the above-mentioned prevailing trends in semiotics, in order to distinguish the grounds for the (re)creation of a (new) field of sociosemiotics.

J. Pelc (1997) approaches the topics listed above from a more general viewpoint, trying to vivisect semiotics from the larger to smaller parts. According to Pelc, there exist more general levels of semiotics, such as framework and metastructures, and applied semiotics that also includes the field of sociosemiotics (Pelc 1997: 636). Pelc's argument follows the ideas of Morris (1946) in that "[...] the application of semiotics as an instrument may be called 'applied semiotic'" and "[...] applied semiotic utilizes knowledge about signs for the accomplishment of various purposes" (Pelc 1997: 636). Pelc mentions that:

> "[…] one may also have in mind not only semiotic methods but also definitions and statements contained in theoretical semiotics which then becomes a common basis for various applied semiotics" (Pelc 1997: 636).

This again points at the impossibility of introducing different trends of applied semiotics without support from, and integration with, general theoretical semiotics. Likewise, there should always be a *ground* for creating the above-named subsemiotic disciplines. Thus, it may still be questionable to a degree, whether we can use the term 'applied semiotics' because of a necessary strong link with the theoretical aspect (otherwise, the applications obtain such an *ad hoc* nature that they start lacking common methods and principles). Hooking again up with Pelc's discourse:

> "[…] each individual applied semiotics has its own theoretical foundations. And since some of the applied semiotics are humanistic disciplines (e.g. semiotics of theatre), others are social (e.g. sociosemiotics), still others natural (e.g. zoosemiotics) or formal sciences (e.g. the study of deductive formalised systems), their theories too differ as regards methodology" (Pelc 1997: 636).

It seems, however, that Pelc's understanding of the general and the subsemiotic disciplines follows the realisation of the need to pay attention to the intrinsically reflective nature of different semiotic trends with regard to the general semiotic paradigm. One must avoid distraction that may emerge if the sociosemiotic trend is considered as being theoretically "[...] to a great extent characterised by features typical of theories in the social sciences" (Pelc 1997: 639). In addition to such a complementary aspect, it seems that it is exactly the theoretical connection with the general foundations of semiotics that should always be kept in mind. Other social sciences can offer the methodological aspects the principles of which are similar to those corresponding to old and basic semiotic presuppositions that have often been forgotten in actual studies (e.g. cultural semiotics and the pragmatic aspect of semiotics; see also Kavolis 1995: 8–9).

So, if the realm of objects is, in the end, inseparable from the social realm due to their being semiotically conjoined and integrated, we may simply conclude that sociosemiotics should straightforwardly study all sociocultural phenomena. Such research should include the methods of all disciplines that allow the study of the different levels of sign production and exchange as presented by F. de Saussure according to Bally and Sechehaye. These levels include psychological, physiological and physical processes (Saussure 1959: 11–12), and link up both with C.S. Peirce's discourse on logical and semiotic processes, as well as the above-mentioned areas and channels of semiosis. And regardless of difficulties in finding discussions of 'communication' as a strict term in de Saussure's and Peirce's work, we can maintain that contemporary study of communication, together with different models and schemes of description, involves the above mentioned levels and processes of interaction in the same way as brought forward in sign creation and exchange. These aspects of communication also extend from the individual level up to general societal systems. The *processual stages* of sign exchange as communication have been more clearly articulated by C. Shannon and W. Weaver in their classical model of communication that is the source and basis for the majority of communication schemes today (Shannon and Weaver 1949). While such processual models can principally be traced back to Saussure's sketch of oral speech, other types of communication models centre on the *functions of interaction* as presented by Roman Jakobson (Jakobson 1960).

Some general differences in semiotic and semiological perspectives for studying sign systems

Sociosemiotics is a notion that brings forth questions about the relations between the two major trends in semiotics on the one hand, and relations between the semiotic and semiological viewpoint and further disciplines studying certain outcome of sign genesis on the other. The former connections are fundamental in their semiosic aspects. When agreeing in taking the semiotic trends conditionally as belonging into the same paradigm, the latter aspects raise questions about relations between semiotics and other disciplines studying cultural phenomena.

The relation of semiology and semiotics has sometimes been treated as antagonistic, likewise the trends have been tried to be set in correspondence. An example can be drawn from the work of M. Singer who has set up a comparison of semiotics and semiology (see table 2).

Point of Comparison	Semiotic (Peirce)	Semiology (Saussure)
1. Aims at a general theory of signs	philosophical, normative, but observational	a descriptive, generalized linguistics
2. Frequent subject matter domains	logic, mathematics, sciences, colloquial English (logic-centered)	natural languages, literature, legends, myths (language-centred)
3. Signs are relations, not "things"	a sign is a triadic relation of sign, object, and interpretant	a sign is a dyadic relation between signifier and signified
4. Linguistic signs are "arbitrary"	but also include "natural signs"— icons and indexes	but appear "necessary" for speakers of the language (Benveniste)
5. Ontology of "objects" of signs	existence presupposed by signs	not "given," but determined by the linguistic relations
6. Epistemology of empirical ego or subject	included in semiotic analysis	presupposed by but not included in semiological analysis

Table 2. Comparison of semiotics and semiology by M. Singer (1984: 42).

It seems important to repeat that there is no actual ground or even sense in presenting the Peircean and the Saussurean doctrines as mutually exclusive alternatives by their origins. In a miserable manner Saussure's concept of the sign, and the subject realm of semiology accordingly, has been mistreated continually by referring to the sign as composed of the signifier and the signified. Of course it is not the trouble in several languages in which these notions are in use as the components of the sign, but the realm they are related to: Saussure described the linguistic sign, and in the same manner semiology as a general discipline (Saussure 1959 15–17) was to analyse signs inside other sign systems similar to language. Saussure's original 'concept' and 'sound-image' have to do with the sphere of the physical reality only as much as (linguistic) communication has to do with the transfer of signs (see Saussure 1959). Signs and semiosis are located in the mind, and concepts and sound-images are in connection, on the one hand, with sociocultural sign systems in terms of expression and, on the other hand, with either concrete or abstract referents as already having been switched into the semiotic reality of a community. The mistreatment of the 'concept' as the 'signified' has lead to the understanding of Saussure's doctrine as having the pretension to deal with semiosis in connection with the physical reality, and understanding the 'sound-image' as the 'signifier' has induced the association of it with terms like 'sign-vehicle' (or 'symbol' in the context of cultural anthropology) as a material entity. Thus the Saussurean paradigm lacks of what is being called 'object' in the Peircean tradition, and the 'signifier' can be associated with the 'representamen', just like the 'signified' with the 'interpretant' respectively.

However, these associations seem oversimplified as well, since the semiological viewpoint centres at the level of sign systems i.e., at the level of, as one might say, ready-made vocabulary applied to legitimised referential reality; the semiosic tension arises from relations between the sociocultural reality and institutionalised sign systems on the one hand, and the internalised relations and individual applications on the other. It seems that certain trends in semiotics have been based on such false interpretation of Saussure, and are therefore bound to inspection of representation of the semiotic reality, while neglecting aspects concerning the basis of the latter — the physical reality. Cultural semiotics, being one of them, has centred at dealing with meaningful phenomena as texts, whereas the referential reality is bound to the respective culture, cultural epoch. Suchlike approaches apply the Saussurean terminology without paying enough attention to the fact that the original target of semiology had to do with the physical reality only as far as the speech circuit has to involve the physical sphere in terms of transmission of *parole*. Therefore the semiological perspective is radically different from the Peircean understanding of the sign and semiosis, does not hook up with the physical aspect of meaningful units, and thus seems unsuitable for application in spheres other than belonging to human culture. F. S. Rothschild has found that semiology can be of assistance also at the analysis of natural phenomena:

> "[…] we use the term biosemiotic. It means a theory and its methods which follow the model of the semiotic of language. It investigates the communication processes of life that convey meaning in analogy to language" (Rothschild 1962: 777).

In addition to problems that arise from the metaphoric use of the semiotic metalanguage, a fundamental dissimilarity between the research areas of human and natural sciences have been pointed out by M. Florkin:

> "Molecular biosemiotics is an aspect, not of human sciences, but of molecular biology. As stated by de Saussure, in linguistics, the sign which he considers as the association of a significant and signified, is arbitrary with reference to the relation between its two faces. In molecular biosemiotics, on the other hand, significant and signified are in a necessary relation imposed by the natural relations of material realities" (Florkin 1974 p. 14).

The speech circuit is started and ended on the psychological level of association of concepts and sound-images, which implied the centring of semiological analysis at relations between *langue*, *langage*, and *parole*. In a curious manner, at approximately the same era when Saussure described the speech circuit without, as mentioned, the pretension to involve relations between language and reality, J.v. Uexküll coined the notion of 'functional circle' (Uexküll 1982). Saussure's model of the speech circuit (Saussure 1959: 11) can be interpreted as a basic scheme of both communication and semiosis (inside a semiotic reality), whereas Uexküll's 'functional circle' links an organism with the physical reality

by the 'objective connecting structure' (Uexküll 1982). The latter can be understood as a standard for comparison of diverse *Umwelten*, while the semiological viewpoint presupposes certain comprehension of the code(s) of association of concepts and sound-images. Thus it seems again that the Uexküllian perspective, so as combined with the Peircean idea of the sign as involving the 'object', which can be of the origin in the physical reality, is a possibility to study the behaviour that can be interpreted as semiotic also in terms higher than the level of signals. Without paying attention to the so-to-speak location of semiosis, different fields, both those in which the codes of sign-composition are available for human researcher and those in which codes and ranges of interpretation remain inaccessible, are united and semiotised only via the semiotic metalevel.

Ascription of meaning to merely hypothetically semiotic phenomena on the one hand, and application of rigid uniform methodology to cultural phenomena on the other, has lead to conviction of semiotics by associating it with ivory-towered structuralism: "[...] structuralism pays attention to how structures organise society, but not to how society organises structures" (Hillier and Hanson 1993: 202), and "[...] seems to avoid both the question of the *origin* of structure, and the question of its locus" (ibid.). It appears as if questions about relationships between social and cultural structures in terms searching for the generative origin of the former or the latter pertained to the domain of philosophy, and in the end there remains but acceptance of dynamism between the two (see e.g. Archer 1995, 1996). Concerns about the origin of meaning from the structuralist perspective can be reduced, if keeping in mind the semiological roots of e.g. cultural semiotics and the textualist approach to cultural phenomena. This means that individual performances (texts, behaviour, spectacles) can be analysed against the background of a sign system analogous with *langage* (cultural tradition/text), and connections neither with the actual social nor with the physical reality are to be switched into the research framework. However, such descriptions, as observed, remain formal and semiotisation of research units is again executed on the metalevel. Thus a possibility to bring also semiological studies closer to social sciences in terms of strive towards the so-called thick description (see Geertz 1973), can be perceived in R. Keesing's comparison of semiotics with other methods of studying sign systems (see table 3).

Linguistics	Ethnoscience
Premise 1: Language is a conceptual code underlying speech behaviour. Corollary: The primary goal of linguistic description is a grammar — a structural description of the linguistic code.	Premise 1: Culture is a conceptual code underlying social behaviour. Corollary: The primary goal of ethnographic description is a "cultural grammar" — a structural description of the cultural code.
Premise 2: Each language must be studied as a unique structural universe. Corollary A: A language must be described in terms of its own distinctive elements and principles of order (within the framework of the linguist's metalanguage and his theory of linguistic structure). Corollary B: Linguistic codes and the grammars that describe them are by their nature not amenable to structural comparison.	Premise 2: Each culture must be studied as a unique structural universe. Corollary A: A culture must be described in "emic" terms; that is, in terms of its own distinctive elements and principles of order. Corollary B: Cultural codes and cultural grammars are by their nature not amenable to structural comparison.
Premise 3: The structure of a language can be discovered by applying systematic and explicit procedures to a corpus of evidence. Corollary A: The evidence supporting a grammatical description is a potentially public, finite corpus of data to which an explicit set of analytical procedures has been applied. Corollary B: A grammar is thus testable (to see if it accounts for the data) and amenable to alternative analyses.	Premise 3: The structure of a cultural code can (or must) be discovered by applying systematic and explicit inductive procedures to a corpus of evidence. Corollary A: The evidence supporting an ethnographic description is a potentially public, finite corpus of data to which an explicit set of analytical procedures has been applied. Corollary B: An ethnography is thus testable (to see if it accounts for the data) and amenable to alternative analyses.
Premise 4: Since the linguistic code is mainly unconscious, the data for grammatical analysis must consist of speech behaviour, not informants' statements about the code.	Premise 4: Form 1: The primary data of ethnographic analysis consist of informants' statements about the code and records of their speech behaviour. Form 2: All available data, including behavioural records, the ethnographer's intuitions/and speech behaviour, provide evidence from which an underlying cultural code can be inferred, and against which descriptions can be tested.

Table 3. Premises of linguistics and ethnoscience after R. Keesing (Keesing 1972: 301).

Keesing's ascription of unconsciousness to the linguistic abilities can be questioned from several aspects (e.g. cultural and communicative automatism, naturalisation of both referential units and behaviour, relations between linguistic and metalinguistic apparatus etc.). It is not the purpose of the current discussion to treat these points from the linguistic view, but they bring forth also certain strictly semiotic concerns. For example, if treating, like Saussure, cultural sign systems as similar to language, there arises the problem of how intentionality can be brought more to consciousness on levels similar, but other than language. Thus, if accepting the culturo-semiotic understanding of cultural sign systems as structurally based on language, we might ask, how can linguistic methods be applicable to secondary modelling systems? Leaving these questions aside, we can see that Keesing has pointed at a significant methodological specificity: the study of cultural behaviour must involve the triplet of behaviour, informants' statements about that behaviour, and an ethnographer's interpretation of the both. It seems that this notification is appropriate for any semiotic analysis as well: in order to inspect meaning, one must involve (either concrete or abstract) referents, statements about the meaning and use of those referents, and a semiotic toolkit (that can, if necessary, involve methods of other disciplines) for the inspection of both.

It seems proper to approach the hypothetic antagonism of semiotics and semiology from the viewpoint of the origin of *techne semeiotike* as having its roots in ancient Greek medicine. That original context in which difference was made between symptoms and signs, hard data and soft data (see Sebeok 1994: 144–60), has to do with relating the available information either with physical reality or description of it. The realm of description, in turn, concerns the semiotic reality that is composed of items of concrete and abstract reference. While ethnographic and anthropological studies were originally centred at analysis of artefacts ("the era of the Lone Ethnographer"; first stages of ethnographic research for Malinowski), inspection of abstract reference has widely been associated with the linguistic sphere (e.g. Keesing 1972). Now, when it is clear that the study of culture can centre at artefacts, or mentifacts and means of expression for the both, i.e. sign systems (that can again be articulated through artefacts), it can be noticed that culture can still be approached from a unified paradigm. In other words, the realm of culture can be analysed both through the artefacts and manners of their production. Solutions to ways of actual analysis have been developed in anthropology together its various trends (see e.g. Keesing 1974). At the same time understanding the necessity to describe artefacts through the process of their emergence points out the need for a qualitatively new approach that sees culture and society as continuously (re)produced. The realm of sign systems and their sociocultural context neither form nor hardly have a stable background against which to analyse them; thus a key word for the description of cultural and social dynamism is 'construction'.

Consideration of sociocultural phenomena as 'constructed' is by no means a novel trend in neither linguistic nor ethnographic approach. P. Berger and T.

Luckmann represented qualitatively new standpoint in 1966, drawing attention to the fact that the very subject, the society, that constructs and organises sociocultural phenomena, is a construct itself (Berger and Luckmann 1972). The importance of the work of the named authors lies in proposing a detailed outline of the institutional organisation of the social reality. On the one hand they drew attention to culturological and semiotic peculiarities of social order that had largely been hidden or hardly relevant in sociological studies that far. On the other hand the idea of the constructed and institutionalised nature of societal objectivity broadened the scope of relevance of the context of semiosis and meaningfulness. However, it is possible to detect ideas based on the simultaneous arbitrariness and institutional inertia of sign systems and meaning of cultural phenomena in works categorised as semiotic both before and along with that of Berger and Luckmann. For example, we can remind of Saussure's doctrine, which maintained the arbitrary relation of concepts and sound-images on the level of social institutions and crystallisation of that relation for individuals (Saussure 1959: 131–134). Thus the semiological approach presupposes the inspection of the sociocultural construction of signs and sign systems, while the semiotic angle adds attention towards relations between the physical reality and sign systems. Sign systems are used by individuals who modify them in a limited range; at the same time social institutions (from dictionaries to formal social organisations) set norms for the usage of semiotic systems, and (social) construction as an act of modelling applies to all levels of semiosis, beginning from the creation of signs to the use of them in communication.

Some possible research units for sociosemiotics

It is impossible to overlook the fact that the terminology extensively used in several traditions of semiotics contains a considerable number of controversies. Even if we have posed studying of meaningful units and artefacts in sociocultural settings and communication chains of different types of integrated sign systems as the broad task of sociosemiotics, still the problem remains: how to delimit both the units of study, just as well as contexts of their emergence? Thus, an attempt should be made to find answers to three main sets of essential questions: (a) what are the principal starting points from which to find meanings and meaningful structures; (b) what are the methods of studying these meanings and meaningful structures; (c) what is or are the things(s) to be studied?

In a way the last question has already been touched upon, when speaking in a broader perspective of how to distinguish between different objects of study. The methodological perspective concerns the question how to recognize semiotic, or rather sociosemiotic meaningfulness in the realms and units under inspection. In literature on semiotics we occasionally meet the term 'socialness'. Among others, a collection of articles edited by S.H. Riggins (1994a) could be

mentioned, that is based on the standpoint that "[...] objects are a cause, a medium, and a consequence of social relationships" (Riggins 1994b: 1). Things, objects of common life are social in their essence and, accordingly, there must be a criterion in semiotics that can be called 'socialness'. It is interesting to note the similarity of such reasoning with Russian Formalism and the idea of turning attention to 'literariness' instead of 'literature'. A central characteristic in discovering the socialness of objects is interaction. Interaction is not restricted to communication between objects and people or the usage of objects in communication, but involves a considerably wider range of phenomena and aspects. Objects are often classified according to their pragmatic function and value of use, but they also serve as means of interaction between people. Objects are meaningful units and, as such, depend on their concrete communicative context and act of use. Objects may be involved in an individual's "unilateral" communication with the social, cultural and physical environment, and they may be used for exchange of messages between multiple persons. However, from the point of view of semiotics, differentiating between the situations of object use in terms of unilateral communication and interaction of more than one individual does not seem to be productive. The formation of semiotic subjects as counterparts in communication and thus in interaction both with and by objects is always social, linking the individual to the societal, since objects have gained their 'starting-point meaning' due to sociocultural circumstances. For example, even when looking at furniture in private rooms or viewing intimate things that are special tokens for an individual person only, or for a very limited group of individuals, we confront items that may be just ordinary commodities for the rest of the community, while particularised meanings ascribed to them still derive from social experience, memories, cultural values or the similar. With the Saussurean term to describe distinct elements (and distinctiveness of elements) of a semiotic system in mind, value, indeed, derives from interaction with other elements of the system, and this interaction is activated and dynamically directed by the users of the system. This becomes obvious in such examples as symbols of the nation kept in a wallet, the national flag kept on the top of a desk at home, etc. Culture, cultural phenomena, human sign systems are indeed social in this sense; artefacts are social in their meaning (and dynamic in this meaning) by virtue of integrated use of all cultural semiotic systems. Socialness always derives from social interaction that leaves objects behind also as tokens of itself. Thus 'the socialness of things' may at first seem a trivial expression, but it serves to indicate that human beings have charged most artefacts with such a burden of cultural and individual history and meanings that it has become difficult to identify oneself without those objects. Therefore, description of the socialness of things should involve an analysis of the identity discourse of both individuals and larger sociocultural groups in various dimensions of the criteria possibly used for the determination of social units (language, social order, artefacts, chronotope, ethnic structure, etc). The connection of artefacts and social

structures in all possible types of communication leads further to the theme of identity, socialness and cultural fetishism in the widest sense that seems to be already an independent sociosemiotic theme.

An idea of the semiotic power of objects is widespread, one may recognise it in K. Marx's notion of 'material communication of men', and often also in (cultural) anthropology — e.g. exchange systems of goods, tokens and commodities. (Some instances in cultural anthropology demonstrate also semiotically especially interesting cases of people, mostly women, being 'objectified' as units of communication in exchange systems.) The separation of such 'material communication' from S. Freud's communicational-semiotic dimension of interaction seems too artificial, for artefacts are but one form of sign-vehicles. Artefacts are subject to 'social facts' that, in E. Durkheim's expression, are characterised as: "Every way of acting which is general throughout a given society, while at the same time existing in its own right independent of its individual manifestations" (Durkheim 1938: 13). It is a separate question where exactly those meaning-loaded realities external to the individual exist, and it has been discussed at length in that branch of cultural anthropology that looks upon cultures as symbolic systems. This trend is represented by, e.g., C. Geertz (Geertz 1973) and D. Schneider (Schneider 1968), the main idea being that meanings do not exist in the 'heads of social actors', but 'in-between their heads'; i.e., meanings are not personal, but social. Considering Durkheim's 'social fact' and semiological studies of approximately the same period, we can refer to a relevant comparison presented by R. Harris (Harris 1991). Harris compares the notion of social fact to issues connected with Saussure's *langage*. A question may be posed as to the possible mutual influence of both authors on each other in terms of these two concepts. *Langage* and 'social fact' may seem similar as they point at approximately same level of abstraction in comparison with the individual use of sign systems. However, it is to be borne in mind that, according to Saussure, language can be examined through *parole*, in the same way as the fundamental level of all sign systems can be reconstructed through case analyses of individual usage acts. Durkheim's 'social fact', on the other hand, cannot be ultimately clarified, because individual uses of social facts are, for him, far too imperfect to provide data regarding sociocultural superstructures. Harris claims that:

> "[…] there is no basic difference between the Durkheim of *Les règles de la méthode sociologique* and the Saussure of the *Cours*, granted the interpretation of Saussurean *langage* as something 'universal to the human nature' and of *langue* as a social production in the sense that every language presupposes a particular culture or community whose purposes it serves. Moreover, the implication is that for Durkheim such facts as are 'universal to human nature', even though they clearly affect people's social behaviour, lie outside the scope of sociology" (Harris 1991: 225–226).

However, for contemporary semiotics, which is an interdisciplinary science in its perspectives on studying sociocultural phenomena, these differences need not be important any more and seem to have merged with new units of study. On the one hand, it has been proposed that the means and ends of cultural analysis are *cultural units* (Schneider), on the other hand, we can refer to 'historical facts' (Uspenskij 1988) that constitute sociocultural contexts and influence the functioning of semiotic systems in a constructed semiotic reality. Schneider defines cultural units in the following way:

> "A unit [...] is simply anything that is culturally defined and distinguished as an entity. It may be a person, place, thing, feeling, state of affairs, sense of foreboding, fantasy, hallucination, hope or idea" (Schneider 1968: 2).

This definition of research units in cultural anthropology points out their nature as conditional and conventional. Cultural units that exist in semiotic reality include both concrete and abstract reference and they need not necessarily be connected with referential realities in the physical sense. Cultural units are constructs that make up culture and have been created in a sociocultural system. U. Eco seconds the anthropological view in a semiotic perspective by defining the cultural unit semiotically as a semantic unit inserted into a system (Eco 1976: 66–68). This implies the social nature of any semiotic study and any semiotic unit, inasmuch as there would be no objects of study for semiotics outside the sociocultural context of use of a cultural unit in a (semiotic) system. One could agree with J. Searle in calling socioculturally meaningful units 'institutional facts' in contrast to 'non-institutional' or 'brute facts' in the sense that the first are "dependent on human agreement" and "require human institutions for their existence" (Searle 1995: 2). Maybe the Sapir-Whorf hypothesis of linguistic relativity would indicate low attention of Searle to the segmentation of external contexts into meaningful segments. However, Searle dwells on such an argument himself and admits that "[...] in order to *state* a brute fact we require the institution of language, but the *fact stated* needs to be distinguished from the *statement* of it" (Searle 1995: 2). As implicitly indicated in the above definition by Schneider, cultural units as meaningful constructs can be divided according to the habitual semiosic logic or, if you will, the conditional location (or source) of their meaning. This 'location of meaning' can be determined in terms of subjectivity and objectivity in the ontological and epistemic realities that are constructed and represented in sociocultural contexts. The latter are not built only in terms of cultural objects and artefacts (Riggins 1994a), institutions (Berger and Luckmann 1972) and language (Halliday 1978, Searle 1995), but also as reflective systems that continually make and remake their identity discourses in terms of historical facts (Uspenskij 1988). Historical facts represent the 'game between the present and the past' in which:

> "[...] from the viewpoint of the *present* there is executed a choice and understanding of the past events — inasmuch as memory of them is preserved in collective consciousness. By this the past is organised as text

readable from the perspective of the present. […] Correspondingly, reception of history turns into one of the main facts of the evolution of the 'language' of history, i.e. of that language in which communication is enacted in the historical process" (Uspenskij 1988: 73–74).

Uspenskij's opinion points out that the units of culture are formed in sociocultural discourse that can be traced by such items that have been selected for preservation in cultural tradition. Historical facts can be both artefacts and comments on certain phenomena or events that have been switched into or have passed through the social system of action. T. Parsons described the 'social system' as:

"[...] *inter*action of individual actors, that is, takes places under such conditions that it is possible to treat such a process of interaction as a system in the scientific sense" (Parsons 1952: 3).

A most important implication of such approach is what brings Parsons close to the cybernetic view on information circuits in general: the social system can be subjected to the order of theoretical analysis that has been applied to other types of systems in other disciplines (Parsons 1952: 3). An essential factor that makes social systems and the descriptive frame of concrete cases relative is the orientation of an actor to the communicative situation. Parsons has defined the 'situation' as "[...] consisting of objects of orientation, so that the orientation of a given actor is differentiated relative to the different objects and classes of them of which his situation is composed" (Parsons 1952: 4), while the 'object world' is composed of 'social', 'physical' and 'cultural objects' (Parsons 1952: 4). Whereas a 'social object' can be seen both as composed of other actors and as the one who has switched him- or herself into the referential reality, 'physical objects' are non-interactive empirical units, and 'cultural objects' are the symbolic elements of cultural tradition or value patterns (Parsons 1952: 4). Besides the psychological aspects concerning the dynamic (self-) determination of 'social objects' (cf. Mead's distinction between the 'I' and the 'Me'), a relational moment is implied by the 'cultural objects' that can, via internalisation, be included into the structural components of the self (Parsons 1952: 4). The construction of a communicative situation from the standpoint of an agent depends largely on the motivation of the self: only in the case of motivated attitude towards a situation, can we talk about social action proper (Parsons 1952: 4, 543ff). Motivation has to do with psychological, just as well as with cultural drives (let us remind of Parsons as a student of B. Malinowski), whereas the arrangement of action elements is a function of the agent's relation to his/her situation and to the history of that relation (Parsons 1952: 5). In that sense communicative action is dependent on the system of expectations (Parsons 1952: 5, 32ff), and similar to the logic of C.S. Peirce's notion of habit as a determinant of semiosis (CP 5.491). This implicit semiotic counterpart of analysing social systems makes the position of Parsons a little ambivalent: systems of expectations have evidently to do with abductive logic and thus

distances social systems from the (mechanical) cybernetic information systems. Whereas Parsons could have been associated with such an approach to culture and society that lays stress on the social factors, and seen as paradoxical in terms of actually setting social systems under the influence of the structural units of objects framing the social situation, we can finally see the dynamic relation between the functional and the structural categories. Parsons himself presupposes this dynamism also: situational elements can obtain specific meanings and turn into such symbols for the self that gain importance for his/her system of expectations (Parsons 1952: 5). In the case of social interaction these signs acquire shared meanings and start to mediate communication between different agents; then we can talk about the origin of culture (Parsons 1952: 15ff). The psychological, social and cultural considerations are connected also in what Parsons called the orientation modalities of interaction, for in order to be communicatively successful, one has to set his/her motivations in accordance with certain sociocultural contexts (connected with established values) and requirements (for the definition of the cathectic, cognitive and evaluative modalities see Parsons 1952: 7). Thus communicative behaviour, at least in order it to be successful, must be fundamentally reflective, and follow certain logical patterns. These logical patterns (evaluation standards, etc.) are embedded, transmitted, learned and shared by culture. Thus culture can be understood as super-agent on its own that functions in an alike manner as understood in terms of the Tartu-Moscow school of cultural semiotics: it preserves, transmits and generates meanings. However, Parsons' sociological thought differs from that and is close to Kluckhohn's cultural anthropology: the pattern consistency of symbolic systems does not refer to the consistent functioning of culture. While, as it were, existing in the background, culture can actively function only as a part of a concrete action system (Parsons 1952: 15ff). Individual and social action as overt behaviour is what discloses cultural patterns and makes cultural units visible. On the other hand, behaviour as enunciation of communicative habits and units of the semiotic reality helps to determine social systems. While culture as a relational pattern element that can be diffused amongst several social systems is a fairly an abstract category, social systems can be defined more precisely. As mentioned, such distinction between society as a concrete and culture as an abstract notion has been made in cultural anthropology as well (Kluckhohn 1961: 24).

   Cooperation between individuals forming a society can thus be described, on the one hand, by those institutions that mediate interaction and, on the other hand, by a more-or-less negotiated aim of teamwork. While the goals of social interaction influence the structure or institutions and integration between them, it seems important to treat not only societal organisations as institutions, but to regard sociocultural sign systems in an alike manner. That will probably help us to see how social situations unite social groupings also diachronically, and how

the study and interpretation of the world is managed through the diversity of communities of (linguistic, communicative, cultural, and semiotic) competence.

Management of the social *and the communality of signs*

Social congregations can and have been distinguished in most general terms as social organisations coherent in membership sentiment that is due to shared visions of culture and cultural well-being. Ideal culture and cultural ideals have been considered as the defining features in understanding society as a community whose members share the vision of Good Life (see e.g. Redfield 1960) that also determines the perspective of norms as standardised mass habits of behaviour according to the imagination of 'how things ought to be' (see Hoebel 1960). In spite of their essence seeming vague at first glance, it can still be maintained that the sociocultural visions that influence everyday behaviour form a basis on which the members of a sociocultural community can actually be quite exactly delimited and counted: according to Kluckhohn (1961), 'society' refers to a group of people in which individuals interact with each other more than they do with other individuals; it consists of people who cooperate in order to achieve certain goals (Kluckhohn 1961: 24).

Defining the aims of a social organisation, we again come to the crossroads of cultural anthropology, psychology and semiotics: the dynamism between humans as biological organisms and humans as cultural beings is revealed in the tasks of the social organisation. In terms of J. Ruesch, "[...] social organization is designed to achieve a designated purpose and to prevent conflict" (Ruesch 1972: 25). Ruesch maintains that:

> "The purpose of social organization is to: define group tasks; delineate boundaries in time and space (to each his own); establish priority systems (value systems); provide for emergencies (protective services); make new rules (legislature); interpret the rules (judiciary); reinforce the rules (law enforcement); allot positions within the organization (civil service); make decisions (executive); initiate and implement group action (exploration of outer space); and regulate exchange with other groups (competition, cooperation)" (Ruesch 1972: 25–26).

The build-up and the relevant tasks of a social organisation also reveals in general principles the latter's connection to the cultural processes that can be witnessed both in intra- and intercultural interaction. On the one hand, it is clear that a social organisation is structured to meet the various needs of an individual; on the other hand, it is obvious that an individual is connected to a certain social reality via socialisation. The following question might concern the relation between the individual and a social organisation in terms of their possible influence on the behaviour of each other. How an individual can influence the social organisation (s)he belongs to is quite a specific question

already, and today we can more often speak about how a social organisation communicates with its individual members. The media that represents a third party in shaping the relationships between a social organisation and its members adds a further specific problem. But first: a social organisation can communicate and operate with its members by certain social actions. These engagements can be called social operation or action models (see e.g. Ruesch 1972: 401), and their features depend on how a given sociocultural system sees its social organisation in terms of categories of construction. In turn, success in guaranteeing the totality and coherence of a social organisation depends on the explicit determination of the constituents of a society (e.g. native, labour, ethnic, linguistic, kinship or other elementary groups) and application of the relevant social operational action models (see fig. 2).
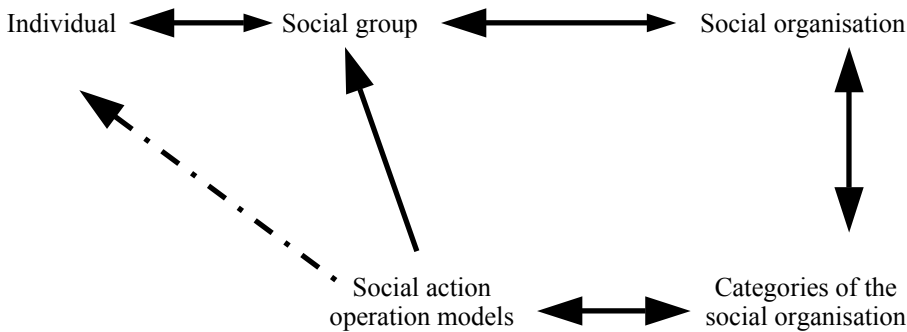
Individual ⟷ Social group ⟷ Social organisation

Social action operation models ⟷ Categories of the social organisation

Figure 2. Definition of a society and its members is in interdependence via individual interests and social operations.

If operational models are applied to irrelevant societal categories or used in inadequate manner as regards the sociopsychological needs of an individual, they rather disintegrate the society than congregate one. Individual sociopsychological needs ought to be understood as dynamism between the needs of an individual (in A. Maslow's terms) and her/his understanding of his/her obligations to the social whole.

The connection between a social organisation, its sign systems and individual variations in uses of the semiotic tools offered by a sociocultural system can be studied, based on culture and its semiotic mechanisms. In other words, the coherence of a social organisation can be measured by the integration of its members' cultural behaviour. This is a topic originating already from N. Chomsky's 'linguistic competence' and leading to the notion of semiotic competence ('linguistic competence' and the cognitive image of the 'correct' use of language → 'communicative competence' and the cognitive image of the 'correct' segmentation of communicative situations → 'cultural competence' and the cognitive image of the 'correct' interpretation of cultural units → 'semiotic competence' and the cognitive image of the 'correct'

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interpretation of the semiotic reality, differentiation of the concrete and abstract referents and use of sign systems); nevertheless, it indicates the structure of social organisations as based on cultural processes. Cultural processes that influence the structure of a society and a semiotic reality include, for example, acculturation, accommodation, integration, adjustment and integration with their several specific variations. Social action models that finally determine cultural distances between different sociocultural groups may influence cultural processes. Cultural distance, in its turn, is measurable by comparing different features of both overt and covert behaviour (see an example in Ruesch 1972: 186). These features are connected with the above discussed cultural units and institutional facts and sociocultural deep structures with and by which individuals operate with the various dimensions of environment. And inasmuch as such semiotic entities are revealed in the output of different semiotic systems, their analysis should focus on the specific instants of variability in the distinctive features by which concrete enunciations bring forward the possible meanings of semiotic entities, in order then to reach their conditionally middled meanings. It is then possible to describe the grounds for and norms of the formation of paradigmatic groupings of meaningful units as valid for individuals in a particular social, cultural, temporal, geographic, linguistic environment. The alike analytic operations concern the rules of possible syntagmatic combinations and are connected with both the extent and the boundaries of a particular semiotic reality as linked with sign systems. Here we must keep in mind the principle of arbitrariness governing the relation of sign systems and (semiotic) reality that, however, is limited by a given sociocultural context; therefore this arbitrariness, as described by de Saussure, is restricted for individuals and their use of semiotic systems in concrete referential realities is socioculturally regulated. In an alike manner, sign systems as institutions bind together possibly quite diverse sociocultural groups. A semiotic reality connects various social and cultural associations with the mainstream in grammatical and/or lexicological terms, making communication possible between groupings that may differ in worldview on ideological grounds mostly. Via agreement or a totalitarian position the social organisation binds individuals and groups that have a significant share in either ideological or purely pragmatic aims, and coheres them in political, economic, religious, educational and/or other action models applied to the — in terms of T. Parsons — physical, social and cultural classes of objects in the environment. Again we can see the conditional and goal-based character of sociocultural groups, keeping at the same time in mind the possibility of defining such groups also in the diachronic dimension.

The idea of culture as an abstraction existing already on the object level, together with the principle of controllable data and analysis that would insure congruence between 'culture' as a metalevel theoretical construct and the understanding of semiotic phenomena by the users of a given semiotic community, points at another perspective in sociosemiotics. This perspective is concerned with the development of semiotic vocabulary and discourse in the

reflective discourse of a given sociocultural group. This topic involves the usage of explicitly semiotic vocabulary in natural languages in everyday communication (see, e.g., Voigt 1998; Randviir *et al*. 2000), but also in the reflective output of culture. The latter aspect points at difficulties that often emerge when an attempt is made to draw a line between the scholarly viewpoint and the object level. Yet treatment of behavioural norms, culturally 'adequate' communication patterns, image schemata and the similar is present in the majority of cultural texts, starting with myths, epics, lyrics, etc. Probably it would even be unfair to label some of such texts as 'scholarly pertinent', while letting others to fall into the category of mere cultural phenomena. All reflective praxis is metacommunicative and thus, following Durkheim's logic, we can simply talk about 'different forms' of reflective practices. Reflectivity is evident in religious practices, science, the institutional structure of a society, educational system, socialisation process, instructions for the latter etc. Reflectivity is essential for the formation of social groupings and societies, inasmuch as it concerns the factor of sentiment binding individuals into a sociocultural system. In discussing the formation of social organisations, we are to keep in mind several possibilities or criteria on the basis of which these can be founded: language, culture, statehood, territory, nationality, etc. All these categories are clearly conditional and follow Kluckhohn's logic of culture as an abstraction. Perhaps the only possibility to identify the membership of an individual is his/her subjective understanding as proposed by E. Gellner:

> "1. Two men are of the same nation if and only if they share the same culture, where culture in turn means a system of ideas and signs and associations and ways of behaving and communicating.
> 2. Two men are of the same nation if and only if they *recognize* each other as belonging to the same nation. In other words, *nations maketh man;* nations are the artefacts of men's convictions and loyalties and solidarities" (Gellner 1983: 7).

Thus, on the one hand, people make up social organisations in order to support their identity discourse and satisfy their needs, and on the other hand social organisations ought to make up such a system that would provide individuals with tools to handle both infrastuctural, social and purely semiotic environments. Sociocultural organisations offer their members meaningful past and future visions, determining thereby also respected behavioural patterns for everyday interaction. Sociocultural organisations are by nature reflective organisations, both in respect to presenting sociocultural systems to other similar ones, and representing themselves in the course of formation of cultural traditions (as revealed, e.g., in education). The degree of reflectivity may increase and decrease, and this is often connected with some type of culture change. Cultural change, being a result of the situation of stark contrast between the existing cultural patterns and changed environmental (natural, technical, social, political, etc.) conditions, demands more intensive reflection upon the

cultural core and mainstream in order to keep the identity discourse stable or to re-establish it according to an alternative principle (e.g., to replace the territorial or political principle for the national or linguistic one). However, this reflection must again be a social process in the sense of demanding close cooperation between different social groupings of a society. In the opposite case, national sentiment and social integration will decrease and society as a totality of subsystems will disintegrate (e.g., the case of several post-Soviet republics, including Estonia, in the new sociocultural and political world structure). The success of an identity discourse and cultural reflection as a *social* representation process depends on the clarity of understanding the structure of society in terms of partnership between the existing social organisations and groupings. This is the case concerning cultural change in the situation of overlapping boundaries in national, territorial and political terms.

The situation is different when we inspect the development of cultural or linguistic organisations of Diaspora, as connected with core cultures of both the new cultural space and the territory of origin. Such sensitive situation of cultural change also evokes the reflective practices of immigrants and their intense search for identity. Emigration, especially forced emigration, amplifies the topic of acculturation and individual involvement in new sociocultural groups. Cultural and national identities obtain heightened importance, and the representatives of such emigrants often produce enunciations of understanding cultural and national identity. For example, a well-known Estonian cultural thinker O. Loorits has stated that it is most important to preserve 'Estonian behaviour' and 'Estonian thinking' in Diaspora, paying attention to the 'national characteristics of Estonians', listing among them "diligence or 'assiduity', durability or 'persistence' and 'tenacity', self-control or 'fortitude' and being content with little or 'modesty'" (Loorits 1953: 88). These gain especially great importance in comparison with the foreign 'others' and awareness of them becomes more acute. Regarding the process of acculturation and national identity in Diaspora, we can again refer to Loorits as a cultural critic disclosing features of Estonian-*ness* with his reference to the 'negative sides' of the Estonian national character that pale beside those of foreign communities:

> "[...] in the character of foreigners (who have developed in much better conditions!) we can find much more egoistic stubbornness and malicious glances, much more insidious spitefulness and more sly pulling legs, much more urging intriguing [...]" (Loorits 1953: 88–89).

Thus the construction of national identity seems to be analogous to the above-mentioned 'socialness of things', that is reached to simultaneously with the 'meanings of objects' through the communicative use of both cultural and physical units. If cases are viewed in which the cultural (or linguistic) identity is crucial for the identity of a social group, we can witness the very formation of the European cultural, social and political landscape as based on the principle of nation states. According to Gellner's statement, "nationalism is primarily a

political principle, which holds that the political and the national unit should be congruent" (Gellner 1983:1). However, like all possible criteria of defining social groups or communities, the sentiment determining membership feeling depends on social communication and is thus fundamentally connected with the ways in which available sign systems are used. Identities are constructed largely by the medium, and we can agree with Gellner in that:

> "The most important and persistent message is generated by the medium itself […]. That core message is that the language and the style of the transmissions is important, that only he who can understand them, or can acquire such comprehension, is included in a moral and economic community, and that he who does not and cannot, is excluded" (Gellner 1983: 127).

Thus all sociocultural communication, whether we inspect face-to-face interaction, mass media, communication through objects or other media, is also metacommunicative and therefore provides sociosemiotic analysis of a community's semiotic reality with valuable information. Semiosis as a mediation process is social, and in fact it comprises syntactic, semantic and pragmatic analysis already on the object level. In this sense the object of sociosemiotics includes the reflective practices that are social by virtue of cognitive processes and also because of the sign systems that can be used to articulate those processes. Thus, the field of sociosemiotics involves analysis of using culture and sign systems, and also the sociosemiotic reflective thought through which bearers of a culture become aware of their sociocultural reality and sign systems. Sociosemiotics should treat the use of sign systems and meanings in sociocultural contexts, just as it should inspect the evolution of the semiotic vocabulary and thought in society. This points at possibilities of control of the descriptive discourse and the nature of sociosemiotic research as representing features of both general semiotics theoretically, and other social sciences in the methodological perspective. The descriptive discourse, as shown above, can, in turn, indicate at the probability of determining social groups not on the level(s) of (primary) needs (cf. Malinowski, Maslow), but on the level of metaneeds as defined by A. Maslow. Metaneeds that are principally mediated (at least through socialisation) by the social organisation, lead to the formation of non-state or interest-based social groups that can transcend limits in both time and space; in the long term, in the context of our discussion, we can relate the topic to the formation of the 'Eurocentric' worldview or 'Western culture'.

Interdependence of the local *and the* global

The treatment of sign and communication systems as institutions helps to overcome possible difficulties that have emerged along with the era of globalisation. Interaction between individuals on interest basis through a

common non-state and so-to-speak a-territorial medium and language distances the definition of social and cultural groups as bound to certain geographic features that were important for determination of e.g. culture areas. Globalisation is not a novel sociocultural process to be discussed in social and humanitarian sciences. Contemporary treatments of globalisation are often related to the idea of the 'global village' that has usually been associated with contemporary mass media. In our current context, however, we shall follow a different understanding, according to which globalisation, on the one hand, has complex historical background, and can, on the other hand, be noticed in the early developments of European and world culture. The beginning of globalisation as a sociocultural process has been associated with the 15th century (Robertson 1990), and can roughly be understood in both functional (from early Christian ideas to contemporary international movements) and structural (from the Gregorian calendar to nuclear devices) developments. Therefore it seems useful to consider globalisation as a process connecting social, economic, and semiosic aspects of shared values in terms concerning both artefacts and purely semiotic entities. Globalisation has to do with both what has been called Fordism in economic and industrial spheres, and consciousness industry on the other. One could propose a set of stages connecting the two from the perspective of contemporary economy: (a) mass production, standardised product, (b) rigid standardised stable production, (c) necessity for stabile demand, (d) creation of driven needs and the necessity for increase in the number of customers, (e) intracultural consciousness industry, (f) extracultural (intercultural) consciousness industry, (g) globalisation of understanding material values, [(h) globalisation of understanding moral values, (i) semiosic globalisation]. These stages have to do with the shaping of understanding the world and representation of that knowledge, and apparently they can be detected much earlier in history than what are being called the modern times. Globalisation has to do with making sense both of time, space, identity, values, and distribution of suchlike information. Therefore semiotics has to turn to its original role of being a 'techne' by which to find answers to the *how*-questions that concern the techniques of semiotisation of the named categories. One can see the importance of the role of education in the explanation of these regularities in the socialisation process (on respective challenges for educational semiotics today see e.g. Kress 1996).

Today it is evident that globalisation of several types of information both equalises societies that have easy access to contemporary mass media, and deepens differences between the technologically advanced societies and those that have restricted opportunities of using media by either economic or political circumstances. Globalisation therefore still implies the topic of unilateral and/or bilateral semiotisation of international agents (on this topic and 'centre' and 'periphery' in international communication see Marcus 1992). In actual cases one has to differentiate between globalisation, homogenisation, and cultural imperialism, and again deep roots of consciousness industry together with its

manners of blending these phenomena have to be taken into account. While today globalisation is regarded either as an anonymous process, or one of those associated with non-governmental institutions, it can be associated with traditions of institutionalised socialisation techniques practiced ever since the foundation for contemporary worldview was shaped in the Middle Ages. The dynamism of globalisation as related to socioculturally established shifters has to do with items of the semiotic reality in terms of the ontologically objective, ontologically subjective, epistemically objective, epistemically subjective features and/or categories (on these distinctions see Searle 1995: 39–58). These categories become important when trying to explain the status and degree of objectivity of institutional and brute facts in the semiotic reality.

The influence of images obtained from global information channels on ways of life and culture traits of the so-called primitives and the 'developed societies' have been vividly exemplified by K. Tomaselli who has described a transformed life-style of natives in South-Africa that occurred exactly due to global travel and globalisation of images of whole cultures (see Tomaselli 1999). These contemporary developments of (inter)cultural image-creation can be dated back to centuries ago, as will be shown below. However, an important distinction has to be made between globalisation, colonialism, and internationalisation: a crucial question about agents in intercultural and inter-societal communication is freedom and triggering mechanisms in sociocultural processes that lead to exchange, imposition or admission of culture traits. These processes usually occur in complex combinations, but a principal point lies in the initiative agent:

> "All countries have to deal with the effects of globalisation in the contexts of their histories. They are also subject to the effects of internationalisation, a term by which I want to name the cultural, political and economic influences from somewhere outside a particular locality on the value structures, practices and forms of social organisation of that locality" (Kress 1996: 188).

Globalisation thus seems to connect with homogenisation of world culture areas, and in a curious manner it proceeds through asymmetry that characterises both the manner of communication and also the stock of knowledge involved. Such asymmetry entails inequality of subjects of communication: the stock of knowledge involved depends, amongst other nuances, also on technological resources. Consequently globalisation must not be understood as necessarily a process in the course of which information and knowledge are being spread across the originally dissimilar culture areas. Globalisation has the facet of deepening disproportion of development in different regions, and such inequalities often get embedded in images of communicative subjects in world communication. The development of Western worldview has been in connection with spreading certain culture themes and long-lasting stereotypes of other cultures as subjects or/and objects of communication. Taking into account the nature of globalisation, it is also important that societal representations of

knowledge as, on the other hand, ideological educational devices, connect formally (state-based) conducted sociocultural processes with informal structures (business and non-profit organisations) that are often stressed as agents in contemporary globalisation. This means that globalisation is not characterised by certain strict regulations and norms, but rather by operating with terms of values and needs. The latter, however, can be seen as institutionalised to a large extent, and preserved in both primary and secondary socialising structures.

Globalisation connects ontological and epistemic realities, and in order to analyse its semiotic aspects, we are to focus on (institutional) worldview, geographic reality and representation of the environs. When talking about subjects of globalisation today, even if ascribing importance to non-state organisations, we are to keep in mind the impact that the nation states of the 19th century had on the shaping of the structure and contents of educational systems. During that era of nation states and other states with governmental structures, nations and other social units were relatively individualised and more clearly identifiable. Suchlike units were internally structured in terms of values, preferred habits and norms that were reflected in state-level legislative systems. Thus it was and still is possible to look at international relations so as based on stereotypes created on the basis of epistemically objectivated value systems. This has made it possible for bearers of different citizenships to organize worldview that was, and from time to time still is, much based on politicised discourse relying on the notions of 'cultivated' and 'developing', 'good' and 'evil'. Such semiotisation of 'other' areas and cultures is largely connected with the technique of displacement of features and values that are 'understandable' for the target audience, but unsuitable for being associated with the social self. Thus, the negative metaneeds, although existing inside the semiotic reality, are localised in 'other' spaces. This projection of values and meanings is connected with unilateral semiotisation of 'other' cultures, and therefore, having included the semiotic dimension into spatial description, we cannot any more apply the anthropological concept of 'culture areas' to the delineation of relations between socii, since cultural spaces as both geographic and semiotic units are created in the representational discourse on the object level. This means that cultural spaces as macrostructures are based on relative hierarchies that result from the dynamism between relative centres and peripheries (see e.g. Yamaguchi 1992; Marcus 1992), and the formal portrayal of culture traits that characterises relations between culture areas, may not be appropriate for the description of intercultural relations in terms of communication between different semiotic subjects. 'Centres' and 'peripheries' can be purely conceptual categories without any spatial articulation, yet making it possible to create popular messages the meaning of which is due to this opposition. Semiotisation of space and projection of meanings and metaneeds to both conceptual and physical areas is thus related to such unilateral communication that is operated by an intracultural (military, political, media, etc.) power position that makes it

possible to reach group members, to whom knowledge about the world is mediated, in large numbers.

Mediation of the world by (mass) media channels points at the need of distinguishing between communication of the first order or primary communication and non-primary communication (Marcus 1992: 139–140). The former kind of communication refers directly to the referential reality, whereas the task of the latter is to represent the reality that does not require direct indication. While primary communication must meet the category of 'aboutness' (on the aboutness approach see Marcus 1992: 135–137), non-primary communication is related to communication on communication and to mediated communication. Thus it causes a situation that favours, for different reasons like economical factors, lack of knowledge, ideology and so forth, the 'invention approach' (on the latter see Marcus 1992: 137–138) and the creation of new pseudo-realities with the help of constructed indexical elements. The expanse of mediated communication is certainly facilitated exactly in and by the periphery, places and events that are situated far away — either geographically, conceptually or for both reasons — from users of the respective information produced. In the same manner the declination of primary communication into the periphery of semiotic mechanisms is advanced by totalitarian-ideological sociocultural contexts. It is probably correct to maintain that unilateral "communication" has created favourable grounds for unilateral semiotisation of 'strange', 'alien' individuals, social groups or cultures. In the situation of unilateral communication there is not possible to speak about two or more participating 'semiotic selves', but rather about such semiotic subjects that are created by one and the same semiotic self (on the 'semiotic self' see Wiley 1994). [In this line it is perhaps characteristic that Marcus considers it plausible to view international communication generally as communication on communication; see Marcus 1992: 144ff.]

Spatialisation of knowledge and values, and the due importance of knowing locations connect the topic of globalisation as a centuries old sociocultural process to the development of geographic and semiotic image of the world. One of the most vivid and influential fields that bears, represents and teaches worldview in accord with the geographic dimension is connected with mapping on both purely cognitive and artifactial level.

Semiosic limits of a semiotic reality

The concept of globalisation and problems entailed by it at the determination of social groups as bearers of a certain culture might possibly be solved by the help of the semiotic notion of the semiosphere introduced by J. Lotman. In practical analysis, however, it seems that instead of being a research unit for semiotics, the 'semiosphere' is a philosophical concept under which it is extremely difficult to understand any referable subject of inspection. One can notice such

problems already at trying to fit the concept of semiosis into the framework of the paradigm centred at the semiosphere. Namely, if following the idea according to which semiosis is the "[...] process in which something is a sign to some organism" (Morris 1946: 366), and the respective "[...] sign, or representamen, is something which stands to somebody for something in some respect or capacity" (CP 2.228), it becomes clear that for a something to 'stand for something' there are necessarily engaged at least two semiotically incongruent subjects. Semiosis presumes 'difference' (in spite of the contextual suitability of the concept of *différance*, the current work will not engage the so-called post-structural discourse) as a prerequisite for a sign and the latter's relations with the environs and/or other signs. A problem to be met by a semiotician, if willing to circumscribe a 'semiosphere', lies in the delimited or bordered nature of it (Lotman 1992: 13–16). Lotman maintains that: "[...] the notion of the semiosphere coheres with a certain uniformity and individuality" (Lotman 1992: 13) and that "[...] both notions presuppose the semiosphere to be discriminated from the outer-semiotic or alien-semiotic space by a border" (Lotman 1992: 13). Such claims inevitably lead to questions about 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 at issue at either the 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 it possible from a shifted 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 — "[...] the 'reclusion' of the semiosphere lies in its inability to get involved with alien-semiotic texts or non-texts" (Lotman 1992: 13). The current work will try to demonstrate that semiosphere cannot be, if this notion is applicable at all, a "[...] semiotic space outside which the existence of semiosis is impossible" (Lotman 1992: 13). We shall see that a semiotic reality is surrounded by an 'expanse' which is semiotised as 'non-cultural', 'non-textual', 'abnormal', has not been semiotically activated, or not switched into the realm of cultural discourse.

Through the sign systems of the semiotic reality, maps are representations of geographic reality. Thus maps can be treated as projections of semiotic constructs to spatial units —this turns them into spatial cultural models. On the metalevel, attempts to describe cultures by spatial models can be illustrated by the example of cultural semiotics; however, such treatments have seldom the power of extending inspection of individual semiotic systems. This can be noticed in a well-known work *On the Metalanguage of a Typological Description of Culture* from the end of the 1960s by J. Lotman (Lotman 1992: 386–406, publication in English in 1975). Lotman creates a cultural typology,

basing it on a fundamental opposition 'inner—outer', at the same time associating the 'inner', the 'own', with the feature of 'being organised' as opposed to the 'outer' as the 'unorganised'. The 'unorganised outer' is defined from the 'inner' by the lack of certain features: Lotman stresses that the 'outer non-organisations' are not characterised by some other kind of traits, but by the lack of qualities of the 'inner' (Lotman 1992b: 386). The logic of describing sociocultural systems as univocally based on the opposition 'cultural—natural' or, in Lotman's wording, characterisable as not subject to inner differentiation (Lotman 1992: 387), seems to be too generalised. Sharp contrast between the 'cultural' and the 'non-cultural' may possibly be found in certain so-called primitive cultures, but even in their case it would probably be difficult to find occurrences of sociocultural systems being built according to strict binaries: this is proved by e.g. the topic of taboos created in order to manage the blurry intermediate semiotic zones. At the examination of European culture systems, we can see that such non-negotiable dichotomy is hardly the case either. For example, if we take notice of the ancient understanding of the oikumene, the inhabited understandable sphere, we can see it functioning on several levels: the oikumene was definable both geographically (e.g. a city-state, Roman Empire, 'known world') and linguistically (e.g. the opposition 'civilised people—barbarians'). Additionally, non-cultural features could be traced also in the behaviour of individuals belonging into the oikumene both linguistically and geographically (e.g. inappropriate behaviour followed by an offered choice between death and expel in ancient Hellas).

The overall organising semiotic binaries appear to generate additional categories of sociocultural segments, just as well as completely new ones, be the latter linked to the existing sociocultural or physical world or to the purely semiotic reality. Even when confronting monstrous beings in the medieval and other representations of worldview, it is not possible to attribute them the feature of not being organised and thus lacking a characteristic of the 'cultural': antipodes, weird beasts and miracles had to be structured and thereby subjected to certain laws and norms, since they inhabited the same *Corpus Domini*, the divine time-space. The semiotic realities in which sociocultural systems operate may be described in an individualised way, but generalisation of them into monolithic homogeneous organisations seems oversimplified. Maps represent worldview's multiple dimensions, indicating various discourses in a socium simultaneously with numerous manners of categorisation of both physical and semiotic environment. Being complex representations, maps disclose the multiplicity of topics of cultural discourse that may or may not be subject to a dominant one; maps show that worldview is hardly organised by binaries, but rather by tensions between several phenomenological categories that are derived from various reorganisations of the axis 'sacred—profane'. Therefore it seems unjust to bring texts generated during a given cultural epoch together under a common denominator of 'text of culture' that has been treated by Lotman as a construed invariant giving rise to individually varying texts (Lotman 1992:

389). It is the structural flexibility of culture core that makes possible the infinity of possible textual worlds in terms both of semiotic units and semiosic diagrams, and thus it is impossible to outline a univocal structure or meaning of a hypothetic 'text of culture'. Lotman equalises 'text of culture' with 'worldview' (*kartina mira*, Lotman 1992: 389), but a contradiction can be noticed here for the above reasons: while the 'text of culture' is, in cultural semiotics, understood as a hypothetic invariant of varying actual texts, worldview is much too complex a phenomenon for reduction to an invariant — it rather is a tacit integrated stock of knowledge with the capacity to unify both the semiotic reality and the artifactial production of a socium. Lotman confronts his idea about the 'text of culture' also himself by claiming that it encloses everything and it would be pointless to ask about what exists outside it (Lotman 1992: 389) — as the *mappaemundi* demonstrate, also the most savage and strange had to be interpreted into cultural discourse. If still willing to follow the textual paradigm of describing semiotic phenomena, it may be proposed that the arti- and mentifactial realm of a society is biased by a code-text making possible the formation of a unified cultural tradition that is an outcome of a diverse, though integrated worldview which is both socially and individually organised according to the sociocultural institutional structure of a given socium. This, however, does not lead us to the treatment of the sociocultural bodies in terms of semiospheres that would be constructed on the skeleton of 'worldview' and articulated in cultural texts. As mentioned above, it is already the very concept of semiosis (in the so-called Peircean tradition of semiotics) that casts light at the notion of the semiosphere as ineffective in practical analysis. Whereas above we referred to the terms of the semiosphere and the *Umwelt* as principally comparable and even similar to a certain extent, 'semiosis' seems to create a difference between them from the aspect of determining the hypothetic boundaries and contents of these two spheres. This incongruence comes to being, if we turn attention to the position of the describer of the relevant semiotic systems, and recall of the difference pointed out by J. Pelc about the dissimilarity between signs and entities that can be regarded as semiotic. Whereas it can possibly be defined of what an *Umwelt* of a species is formed, using humanitarian methods in combination with scientific ones, it would require a position beyond the limits of *Homo sapiens* in order to delineate the limits of humane semiosis and the contents of human semiotic reality. In spite of certain era-specific examples of markers of the semiotic reality (e.g. the Medieval conception of *Corpus Domini* as both geographic and semiotic), canonical knowledge and the representation of it have never limited the tangible stock of information actually included in different paradigms of culture epochs. Periodical demonstrative disregard of information unfit from the canonical viewpoint has seldom meant ignorance of it. While the Middle Ages have at times been described as dark and paradigmatically rigid (which, if not completely false, is a matter of opinion at most), in that sense following somehow, in the semiosic processes, determined tracks of signals, it is utterly

implausible to maintain that knowledge or imagination ended at the borders of the biblical frames. Without being aware of the actual limits of human *Umwelt* in both physical and semiotic dimensions, it is neither possible to finalise the sketch of possible progress of semiosis, nor to outline the ultimate limits and structure of the semiosphere. Thus, from the viewpoint inside the human species, there can be but extremely rare cases of semiogenesis that might be described as following patterns of signals; the opposite would necessitate a divine position of description alike to the one that has made it achievable for man to chart the *Umwelten* of certain species of fauna. The respective divergence in semiosis has been indicated also by D. Nauta:

> "An important difference between signal and symbol semiosis […] is that in signal semiosis the meaning aspects, and the related functional aspects (which are made explicit in semantics and pragmatics) are not related to the standard interpreter (as is the case with human language) but only to the scientific descriptor of the process, *i.e.* the meta-interpreter" (Nauta 1972: 42).

Thus it seems that in semiotics, analysis must centre at the manifestation of the relation between the reality that has been semiotised and that has not. Semiotic studies can be related with objectivity, as much as inspection of meaning can be objective on the metalevel, if the influence of a researcher is minimised and meanings are revealed in a natural, unconstrained manner. Therefore 'manifestation' adds another category to the semiotic paradigm, and we are dealing with the triplet containing 'semiotised world', 'world unsemiotised' and 'manifestation of the semiotised world'. The only possibility to study the semiotic reality seems to lay in unforced representation also according to the discussion about the different stages of modelling and the relevant sign systems. Manifestation of reflective processes and freedom of semiosis can be principally be connected with high positive correlation between overt and covert behaviour, which can not be automatically inferred from the definition of semiosis as something that in Peirce's and Morris's tradition has been conceived as the "[...] process in which something is a sign to some organism" (Morris 1946: 366). At the same time that 'something' or the sign-vehicle that can be an a particular physical event (a sound or mark or movement) which is a sign (Morris 1971: 96) — seems to point at the sign as a type of stimulus. However, as it is well known, difference has to be made between the denotatum (or referent) of a sign and the influence a sign has on interpreter's attitude and change in his/her internal state which has to do with the interpretant of a sign. Understanding the interpretant as a disposition invoked in the mind of an interpreter comes from Peirce's treatment, according to which:

> "A representation is that character of a thing by virtue of which, for the production of a certain mental effect, it may stand in place of another thing. The thing having this character I term a representamen, the mental effect, or thought, its interpretant, the thing for which it stands, its object" (CP 1.564).

Aspects of sign generation and the locus of sign-situation, as also connected with the problems of signification and denotation (general dispositions and concrete objects) in concrete contexts, have been summarised by D. Nauta in his treatment of semiosis as a five-term relation. In Nauta's formula of semiosis, S (s, i, e, d, c), S stands for the semiotic relation:

> "[…]s for sign, i for interpreter, e for effect (which is the interpretant, *i.e.* the disposition in i to react in a certain way to d under certain conditions c because of s), d for denotatum and c for context" (Nauta 1972: 28).

Nauta stresses an essential difference between the sign and the denotatum, which is by no means a news neither in the Peircean nor in the Saussurean tradition. However, Nauta's treatment involves a cybernetic aspect in semiosis, and he stresses that if the interpreter be regarded as a 'black box', and "[...] sign as its input, one has to be careful not to treat effect as the output of interpreter" (Nauta 1972: 28).

This notification that in its essence coincides with Pelc's warning about the ascription of meaning on the metalevel, implies an important possibility to differentiate between sign systems according to their semiosic freedom and interpretability of generation of interpretants from the viewpoint of anthroposemiotics. Inasmuch as these distinctions seem to imply for the different domains of semiosis in terms of both object- and metalevel, and human modelling systems from biological to cultural stages, we ought to pay attention to possibilities of describing information systems, taking into account relations between the input, possible output, and potential changes in semiosic patterns in future. Therefore one has to consider the following descriptive models of semiosis that, in principle, depart from the mechanical one (see table 4; phenomena are described in terms of causes and effect).

Input	Output	Subject of change in input — output relation	Status of the interpreter
Signal	Reaction (signal or impulse)	Inner structure	Black box intervened from the outside
Sign	Response (sign, signal or impulse)	Preferences	Adaptable black box trained by experience
Symbol	Act (symbol, sign, signal or impulse)	Conventions	Black box which determines its own choice behaviour

Table 4. Differences in semiosic mechanisms (generated on the basis of Nauta 1972: 33).

The notion of semiosis implies that we are dealing with a process, not with a structure, and attachment of static features to sign generation rather characterises the metalevel, not research objects. Therefore it is difficult to talk about rigid and static sociocultural phenomena, including the determination of them in terms of semiospheres. In order to outline the boundaries of a semiosphere, semiosis ought to involve the units of those boundaries i.e., include the extra-semiospherical units into cultural discourse. This cannot but be associated with the semiosic freedom presupposed by Nauta's symbolic semiosis, and leads thus to a deadlock caused by freezing the hypothetical boundaries of a semiosphere on the metalevel.

However, the notion of semiosis and problems it evokes along with the 'semiosphere', point out a possible solution in connection with ideas about the secondary modelling systems. Namely, when connecting the latter with certain canons and stabile regulations for the creation of different types of texts, one can make a hypothesis of determining for boundaries of individual sign systems as institutions that can be determining the scope of 'small-scale semiospheres'. If a text does not match certain characteristics of a certain secondary sign system, that text lies outside of a given semiosphere, and vice versa, a text built according to the dogmas of a concrete secondary modelling system switches into a dialogue with languages forming an intertextual web that can be called the structure of that semiosphere. This, however, presupposes more-or-less rigid use of individual sign systems and understanding of semiospheres as quite inflexible wholes that can be understood in terms of techniques and/or subject matter of creating texts. By this understanding, one might differentiate between different eras of text-production (Renaissance, Modern, Postmodern), biases of representation (classical, abstract, operational), devices of representation (theatre, literature, cinema), etc. It goes without saying that already the notion of intertextuality and connections between sign systems, their specific devices and subject matter lead to the becoming of secondary modelling systems so stiff that semiosis within them could be characterised by signals. And again it is the notion of humane semiosis together with the dynamism involved by the interpretant that, maybe in a paradoxical manner, helps to combine the concept of secondary modelling systems not only with the so-called Peircean tradition in semiotics, but also both with the ideas of Uexküll about the *Umwelt*. Namely, it seems to be useful to view semiosis and sign systems in culture in terms of different stages of modelling.

The stages of modelling are not necessarily to be understood in hierarchy, but rather as containing Firstness, Secondness and Thirdness on all levels of the semiotisation of both the physical and the semiotic reality. On all levels, modelling can be associated with the concept of mapping as related to the above-described stages of text-generation. Thus the origin of cultural sign systems lies in man's needs and abilities of modelling his environs as a biological being, and the creation of *Umwelt*, as indicated also by T. Sebeok (Sebeok 1988), can be understood as the level of primary modelling. Modelling

that comprises selection of certain elements from a wider whole, arrangement and combination of them with units already existing, can in this sense be compared to (cognitive) mapping. Primary modelling, for *Homo sapiens*, is construction of a species-specific *Umwelt* in combination with the biological needs in a certain geographic environment. The result of this process forms the primary stock of recognised elements in the surroundings for further semiosic stages. These environmental units are to do with man's needs as a biological being, and form a reserve (or, in other words, Firstness) of semiotic potentiality that can be realised in higher semiotic modalities. Here lies also the reason why the so-called natural language can be regarded not as the primary, but a/the secondary modelling system: natural language can not, so-to-speak, access the physical reality, bypassing that cognitive organisation that has been created prior to the linguistic one. Thus language is both reflection and construction: it reflects man's needs and abilities to model the physical reality, and the mental organisation of the environs (taking, in the end, into consideration the physical, social, and cultural aspects of the environment), just as well as it constructs the cognitive image of the world into a linguistic model. As a matter of fact, this status of language is represented also in the Sapir-Whorf hypothesis, and in a curious manner it corresponds to the idea according to which mapping (as a so-called overt sign system) preceded language (Robinson 1982: 1). Thus language can definitely be treated as (at least) a tertiary modelling system, and those presumed to be built upon the stock of knowledge and regulations embedded in natural language, as fourth order sign systems. Mapping as a cartographic sign system that results in artefacts, might therefore be categorised as belonging to the latter. There is, however, an important nuance that comes forth at this point: what are relations between the verbal and the visual signs as related to sequences in modelling? Following Peirce's ideas about the complexity and degrees of conventionality of sign relations, pictorial signs seem to be the basis for the linguistic ones, and this corresponds to the above-cited standpoint of Robinson. In this manner mapping — either as a process resulting in artefacts, or an action of guidance and pointing out directions — can be called the primary sign system built on the cognitive image of the world. In cultures dominated by linguistic texts, maps can possibly be interpreted as mediated by language, but this does not diminish the importance of the supposed historical sequence of the development of sign systems, neither does it exclude the influence of sign systems operating with images upon language.

The level of tertiary modelling systems is connected with semiosis by loading the latter with cultural and communicative competence. The current work is basically centred at the, as one might say, culture-genetic signs, and therefore we can accept J. Ruesch's association of social groups and activities with sign systems and the relevant cultural institutions. Ruesch outlines the cycle of signs by the three main stages of development: the creation of symbols, the maintenance processes and the declining phase (Ruesch 1972: 282–284). A sign's degree of being socially shared is related to its specialisation in terms of

reference: the smaller and more coherent a group, the more specialised and determined signs tend to be, whereas application of a sign-vehicle by diverse social units inevitably leads to the dissolution of their items and possibly even fields of reference (Ruesch 1972: 284). Thus uniform semiosic habits help to outline social boundaries in the alike manner to Kluckhohn's above–described view on common goal-oriented activity, and form a way of describing social processes as related to cultural structures and institutions (see e.g. Ruesch 1972: 194–204). By 'sign-vehicles', here, one can keep in mind individual artefacts, just as well as complex wholes like (literary) texts, behaviour patterns, etc. It seems important that social semiosic and semiotic cooperation is a possibility for defining and describing sociocultural structures, beginning from relations between the so-called cultural mainstreams and subcultures to compound inter-state or trans-temporal unions. An example of such functional and structural intertextuality that involves this semiosic logic can be drawn from the description of man in both biological and cultural aspects, from the perspectives of mapping microcosm and macrocosm.

At least until the Renaissance we can detect profound generic relation between the representation of the physical and the purely semiotic phenomena, and the semiotisation of both microcosm and macrocosm under the influence of the religious code-text. On the one hand we witness interconnection of the physical items and ideologically loaded semiotic units, and on the other hand there exists also fusion of scholarly and artistic techniques of modelling. A simplest example to explain this connection between artistic and scientific representation of the environs shows also the link between the humane and the physical essence. Hereby we can refer to the proximity of several levels of modelling the environs as represented in Leonardo da Vinci's *Vitruvian Man* (see fig. 3a) and Ptolemy's depiction of the world (fig. 3b).
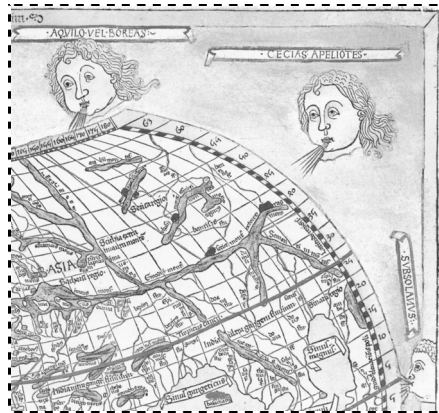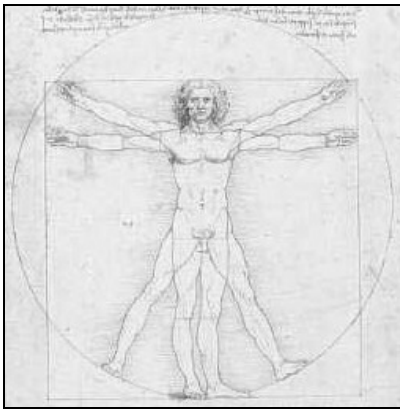

Figure 3a; 3b. Leonardo da Vinci, *Vitruvian Man*. Excerpt from Ptolemy's world map (ca 150 AD, current reprint 1482).

Leonardo himself articulated the influence of depicting microcosm as related to macrocosm as follows:

> "Therefore, by my plan you will become acquainted with every part of the human body… There will be revealed to you in the fifteen entire figures the cosmography of this *minor mundo* in the same order as was used by Ptolemy before me in his *Cosmographia*. And therefore I shall divide the members of the body as he divided the whole world into provinces, and then I shall define the function of the parts in every direction, placing before your eyes the perceptions of the whole figure" (cited from Edgerton 1987: 12–13).

This most remarkable passage shows tight connections between the work by Ptolemy (see fig. 3a, 3b) that became the foundation stone for Medieval and later geographic thought and mapping, and conceptualisation of artistic discourse during practically the same cultural epoch(s). Leonardo disclosed biological matter, using Ptolemy's method of describing physical environment, at the same time choosing, instead of the scientific genre, the one today rendered as artistic. Human and geographic matter were treated by an analogous technique, and it is interesting that a framework created for the geographic environs preceded the inspection of the nature of man. It was not simply the similarity between microcosm and macrocosm, and a more-or-less same perspective of description: reasons for recognition of these parallels were ideologically important as well. These ideological considerations seem to have grown into the description of the geographical dimensions (and, in fact, of man's microcosm as well) and can be found also in contemporary discourse. Namely, without hereby turning special attention to the importance of the organisation of representation as an individual artifact, we can refer to Ptolemy's principle of world depiction and an understanding articulated by P. de Limoges and referred to by S.Y. Edgerton Jr. as follows:

> "Ptolemy insisted in his *Cosmography* that the mapmaker first view that part of the world to be mapped as if it were connected at its centre to the centre of the viewer's eye by an abstract "visual axis"; that is, a line perpendicular to both the earth's surface and the surface of the eye. This followed from an optical theorem stating that only the aspect of an object on axis with the centre of the eye could be clearly observed. […] Ancient Greek optics seemed to explain how God transmitted his divine grace to the human soul. If the human soul were 'clean', God's grace would touch it perpendicularly, entering it, as light does transparent glass, undiminished and unrefracted. If, however, the soul were stained with sin, God's grace must strike it obliquely and be refracted or reflected away" (Edgerton 1987: 13).

The background of the European cartographic tradition, being so connected with the strive for divine understanding, brings forth ideology lying behind the so-called scientific geography and cartography characterised by the gridline method which was invented by Ptolemy. Vertical perpendicularity made it possible to use the proportional gridline method and thus to 'objectively'

describe the contents of a region or other spatial unit systematically. Horizontal perpendicularity was a means to place items into discourse from a selected viewpoint in order to convey the 'true nature' of a locale. Perpendicular clarity and systematic gridline method, however, do not apply only for the descriptive level: it is possible to notice here also a probable ground for both planning cities in terms of general plans (straight streets, orthogonal axis, rulers' monuments on crossings and focal points, etc.), and also designing the skyline of cities (e.g. defining the height of buildings by the cathedral of a city, strive for symmetrical skyline, etc.). The bird's-eye and skyline views of cities bring along another interesting topic, which was probably connected with representing places from the 'ideal angle' — we can detect massive falsifications of viewpoints that use nonexistent places for viewing cities in ideologically acceptable manner. Especially during Renaissance it is possible to get a glimpse of a city from a mountain top or spot on the waters that actually did not exist or was unattainable (see also Harvey's treatment of 'impossible viewpoints', Harvey 1980: 68ff). Bird's-eye views are historically connected with skyline city-views that present cities in their environmental contexts — in these cases the placement of cities in natural and cultural context gives indirect instructions for the interpretation of the representation (fashion, people's postures, social groupings, activities); the same goes for the framing of worldmaps. The skyline views of cities that help to 'understand' a place by horizontal perpendicularity are today often used as monolithic condensed iconic signs helping to identify both the cultural position of a city and the status of cultural phenomena connected with it. City skyline representation is often used for placing cultural production into 'proper' ideological perspective (e.g. the skyline of New York before and after '9-11' in movie production). Ideological considerations may be connected with economic, political, or other spheres, just as well as with the modality of a given production (e.g. trustworthiness). Thus the skyline it turned into an image of certain values and a city may again, like during the Middle Ages, obtain the symbolic function. Thus we can see that the semiotic (and semiosic) competence is embedded and revealed in epochial cultural production in both the synchronic and diachronic dimensions.

The highly, both functionally and structurally, integrated fabric of culture is (partially) activated by a certain amount of individuals whose interaction and usage of the same cultural units and semiotic institutions allows to see them as social groups. In social sciences much attention has been paid to the creation and functioning of a shared reality, be the latter called social, social, cultural, habitual. By the concepts of socialisation and internalisation it has been described how a sociocultural realm is being nurtured into individuals, whereas formal and informal, primary and secondary institutions have been seen as those organisations that help to maintain the sociocultural reality given. It seems as if having being taken for granted that members of certain communities are subjected to specific norms embedded in sociocultural institutions, and that people enter a given sociocultural reality by regulated socialisation that more-

or-less evens individual differences. Thus the analysis of sociocultural phenomena ought to concentrate at the inspection of institutions and sociocultural organisations as more-or-less continuous and stabile regulators of social and cultural processes. However, we can also meet a slightly different viewpoint, according to which many of the sociocultural institutions are to do not that much with the production of uniform society members, but with solving incongruence in opinions, values, behaviour of individuals. 'Truth economy' is a concept that refers to reality, events and facts as negotiable and negotiated: truth is not a notion or feature to be understood as taken for granted, but rather as an agreement or a commodity "[...] which is worked up, can fluctuate, and can be strengthened or weakened by various procedures of representation" (Potter 1996: 5). It is obvious that, in addition to the object-level of fact construction in daily life, the alike issues concern the metalevel and distinctions between research objects, information about them for analysis, and expressions of the both. As indicated above, J. Searle drew attention to the difference between facts and the expression of facts (Searle 1995: 2), and this is in correspondence with observations by B. Whorf on the linguistic construction of facts (Whorf 1941), B. Russell's warning of undue trust in devices of obtaining information on research objects (Russell 1948: ch. 3, ch. 7), and also a possibility of outlining scientific paradigms on the basis of attitude to the triplet of objects, data, and expressions of facts (cf. e.g. Merton 1973). Possible confusion that expressions can bring upon research objects, and also upon facts used in the so-called ordinary discourse, has been pointed out by G. Ryle and his notion of the systematically misleading expressions (Ryle 1992) that are to do with misattribution of predicates. All these topics have to do with what M. Pollner has called 'mundane reason' (Pollner 1987), and can probably be reduced to the seemingly simplistic and the ancient differentiation between the hard and soft data, concrete and abstract reference.

'Mundane reason' is fundamentally connected with Pollner's term for differences in understanding the sociocultural reality, 'reality disjunctures'. Reality disjunctures that are inevitably more-or-less idiosyncratic do not imply incoherence in social behaviour, vice versa — on the sociocultural level individual differences are negotiated and an agreement on actual events achieved. It is important that 'mundane reason' does not presuppose merely dissimilarities in the perception of the physical world amongst peoples inhabiting most diverse regions of the Earth. Neither are 'reality disjunctures' due only to individual differences in interpretive skills, abilities or goals applied to both the physical, cultural and social sphere. Events, facts, phenomena are not automatically internalised or interpreted by the guidelines of socialisation — sociocultural institutions (inquisition, contemporary court, etc.) are making or are used for the making of decisions on reality disjunctures, whereas individuals use the levels of objects, perception and account to overcome differences in interpretation (Pollner 1987; cf. the environmental categories outlined above after Parsons). By footing the discourse and category entitlement (see Potter

1996: 123), communicators construct their identity either as bystanders or as participants, and this self-presentation is, on the one hand, connected with the communicator's 'right' to convey certain messages and, on the other, with the degree of 'normality' of the content of the message. The truth-value of discourse depends on the relevance of references (certain items can be used in discourse as 'existing' or as 'fantastic'), emotional state of the communicator and its relevance to his/her expected condition. Similarly to the so-to-speak ordinary behaviour, judgement on items belonging to the culture core (or the sacred essence of cultural tradition) and naturalisation of novel elements is processed by sociocultural institutions. Recalling the ideas of Parsons about the social system together with its physical, social and cultural objects, we can see that discourse on the mundane reason connects the three in the sense of determining the 'cultural' which, in turn, influences ideas about the (social) identity of a group, and marks also the boundaries of the 'physical' that, in a roundabout way, may provide new grounds for the 'cultural' in both artifactial and mentifacial aspects.

Understanding the world depends on man's needs of creating his *Umwelt*, sign systems and the semiotic reality that are provided him through socialisation. Socialisation, in turn, is largely performed via representations that are filtered by sociocultural institutions that shape the semiotic reality by outlining its central and peripheral components, deciding amongst other issues what to maintain of the traditional and what to switch into cultural discourse of the novelties confronted either in physical reality or invented by the mind. Culture is negotiated through sociocultural institutions that transmit the results to individuals, whereas the process can be conditionally governed by what was described as a cultural text-code. At the same time sociocultural institutions are maintained by individuals, just as well as the cultural production switched into the cultural tradition are filtered by institutions, and the representative power of that production thus depends largely on social cooperation.

SPACE, CULTURE, REPRESENTATION, AND SOCIETY: SOME STRUCTURAL AND FUNCTIONAL CORRELATIONS IN WORLDVIEW

All sign systems operate in physical and/or semiotic space, at the same time all space, be it physical or conceptual, is semiotised via sign systems at several levels of modelling, beginning from the creation of *Umwelt*. Culture is located in a certain physical environment, and artefacts are embedded in environment, shaping the latter in unique ways that have given reason for the description of the planet in terms of culture areas (cf. Vidal de La Blache 1926, Mackinder 1969). Inasmuch as all artefacts encompass a dimension of meaning, culture areas gain a purely semiotic aspect that has given rise to the description of them as semiotic spaces (see e.g. Lotman 1992b: 386–406). Space has been an important category for sensing an existing culture, just as well as for the creation of alternative conceptions of culture in the utopian discourse. Likewise, it is important that not only cultural units are spatially organised: the position of social entities shares the same feature, beginning from the mere positioning of social hierarchy in the physical environment (settlement planning) to locating social entities in the universe (e.g. discourse on the 'normal humans' and those categorised as 'freaks', 'antipodes', etc.).

There is probably no argument in the discourse of contemporary humanities about the semiotic, meaningful nature of space and place. Likewise there can be no uncertainty about the place of space among the study material of semiotics. Different are questions about rendering the extent of meaningfulness embedded in miscellaneous spatial structures, just as well as the realms through which individual disciplines, including semiotics, approach the semiotic dimension of space (see e.g. Tuan 1979, Greimas 1986, Carter et al. 1993, Vanneste 1996, Light and Smith 1997). The immanently meaningful nature of space is closely connected with the semiotic essence of humane being, beginning, on the one hand, from the dependence of the physical well-being of an individual on her/his ability to handle the surrounding space and, on the other hand, from philosophical discussions on the 'true nature and aim' of human existence so as connected with the movement of semiotic structures in spatial configurations (e.g. the Platonic discourse). Today we witness contemporary searches for further human existence in (and by the help of) spatial dimensions other than the three known this far. Thus the semiotic aspects are not limited to overtly meaningful characteristics of space (e.g. the much discussed structure of settlement space), but include also routine spatial practices (e.g. proxemics, movement), common concepts used in everyday communication (e.g. 'cultural space', 'political landscape'), and mythical, philosophical and scientific interpretation of the origin, history, evolution and status of the human species (e.g. shamanism, Platonism, derivations of Einsteinian physics).

Moving onward from the already mentioned example concerning Platonism, we can see that relationships between spatial configurations can and have been used for the explanation of the structure of the humane semiotic reality in general. Besides, this can be done both in the everyday semiotic routine of individuals, just as well as on the scientific level. Focusing on the latter aspect, we can see that the matter does not any more concern space and place as certain categories with definite characteristics, but that they have often been turned into devices of describing different phenomena; we are regularly talking about the spatiality of certain artefacts, concepts, semantic fields, just like these phenomena gain their semiotic value though placement into an overall system (that, through such procedure, in turn, provides these phenomena with the spatial dimension helping to set them into an integral perspective).

Thus space serves as a substrate for culture also through descriptive techniques. It has become into a common habit to talk about cultures in terms of cultural spaces, about cultural units as forming semantic fields and spaces (e.g. the space of a text, painting, etc.).

Some patterns of spatialisation of 'culture' and space conjoined as a meaningful phenomenon: Metalevel

It is interesting to take notice of quite an extensive use of 'space' and 'place' at the description of numerous cultural and environmental phenomena. One can also meet arguments on certain cultural techniques of using 'geographic functions' such as, for example, displacement (see e.g. Lavie and Swedenburg 1996, Pilkington 1998) that can be applied in religious, ideological (Dorfman and Mattelart 1975), cultural (e.g. Segal 1992, Robertson et al. 1994) fictional (e.g. Simpson 1987, Talgeri and Verma 1988) and other (see also Krupnick 1983) areas. However, it seems to be important to stress that in order to displace a physical or cultural unit, it has to be placed in(to) context firsthand. It is through the placement of a semiotic unit into a system that provides it with the necessary distinctive features as compared with other elements of the systems. Only relationships of a semiotic unit with other elements of the system supplies it with a value, if reminding of F. de Saussure's treatment (see Saussure 1959: 111–122), that makes it possible to use it in a representational text or discourse. Thus it is only after such primary placement that a meaningful unit can be displaced, i.e. placed to another (semiotic) system. And apparently the displaced semiotic units, meanings or characteristics function via connections with the original (semiotic) system, even though doing it by the so-called minus device or more or less manifest non-being in the set of the original system. This can probably be observed at different appearances of displacement in miscellaneous fields of human culture, but in the current context an example can be drawn from a common cultural practice explicitly connected with spatial structures. Recalling of the practice of banishment and its history, we can simultaneously

witness the mechanism and essence of both sociocultural and territorial identification. Be it a city, city-state or a larger territorial unit, expulsion of a person from it demonstrates the displacement of a person not fitting in a given sociocultural system sharing common norms. Banishment is thus a vivid example of the congeniality of the conceptual reality and spatial structures already on the 'non-scientific' reflective level of society. It also demonstrates, indeed, that the relevant subject or semiotic unit (e.g. Socrates) was first *placed* into a system in order to test its (his) suitability, then positioned into the sociocultural context, and that banishment as an act of 'displacement' served only against the background of the original state of affairs. In addition, such an act of expulsion helped to 'dis-place' certain qualities present, but unwanted in the given socium. This example concerns Spatialisation, placement and displacement as operations common for cultural routine. However, the terms seem to gain even more importance on the metalevel where we can talk about the descriptive techniques of culture (banishment, in an implicit way, being of course also one of them).

When looking into the semiotic use of 'space', 'spatiality', 'place', 'location', 'locality', or comparable notions — regardless of their more precise terminological content — it is immediately possible to notice that besides studies of spatial structures themselves, the evolution of the relevant terms designating these and the similar structures, there also exists another — perhaps even much wider — way of exploiting these categories. This manner of treatment is of course the metaphorical one. Perhaps it is almost natural that metaphorical thinking and appliance of spatial categories to the description of cultural and other phenomena has made it workable to launch conceptions like 'possible worlds', 'biosphere' and 'noosphere', '*Umwelt*' and many others that are connected with and help to explain aspects pertaining to the topic of construction of the semiotic reality.

Due to the overall relevance of spatial categories, the metaphoric use of them at dissimilar phenomena in a way excluded the possibility of uniform definition of spatial terms. Likewise, it is not a complete discrepancy that the description of (both physical and conceptual) spatial phenomena has not always had clarity and determination of the relevant terms as an obligatory prerequisite for study. This can lucidly be demonstrated by the example of cultural semiotics, especially studies published by the members of the Tartu-Moscow semiotic school. Within the framework of cultural semiotics, space and place have frequently been subjects of investigation. Due to the specific character of the Moscow-Tartu cultural semiotics, however, space has been very tightly connected with the central notion and conception of approach — the text. At a closer examination one can observe that 'text' and 'space' share practically the majority of the crucial structural features of identification. The text — be it literal, written, or not — is definable through more or less stabile construction that is subjected to and ordered by a dominant structural element. This feature is in the relationship of mutual dependence with the bordered nature of the text: in

order to be characterisable as an individual entity, the text is to be delimited as a distinct entity. It is also the boundaries, regardless of the extent chosen (from the literally syntactic level to boundaries involving dimensions of the evolving cultural context), that switch the text into interaction with other texts and semiotic units. It is not difficult to see how relevant these features are for spatial entities as well. These similarities, of course, have not emerged from the paradigm of cultural semiotics, but have been treated all through modern human geography, areal cultural anthropology (not to talk about structural anthropology). However, within cultural semiotics the categories of 'space' and 'text' became more and more interwoven: description of one of them was often executed through the prism of the other. Interpretation of space in textual terms and analysis of texts in spatial categories was probably made possible by the general paradigmatic bias and foundation of cultural semiotics, the interconnected development of continental semiotics, linguistics and cultural anthropology being the most influential factor for this evolution. Another fact of importance is the individual specific nature of both text and space. Space, as treated in structural anthropology and in semiotics further on, is the dimension to unite practically all humane semiotic systems: space is both the context of all primary, secondary (and tertiary, if preferring the argument presented by Sebeok 1988) modelling systems and also the substrate for them. Semiotic activity is carried on in spatial structures, while the latter provides props for building up meaningful structures beginning from the biosemiotic construction of *Umwelt* up to the creation of very complex semiotic structures like statehood, national and cultural identity, etc. In an alike manner the text serves as a basic unit to format and form the semiotic reality of a socium. Texts are manifestations and constituents of the cultural tradition, often treated as quite an organic cultural phenomena that in a way exist independently of (human) culture bearers (according to T.S. Eliot and trends including many of the postmodern ones that have essential origins in his ideas). The precondition of fitting with the cultural production already existing turns the emergence of texts into a most organic phenomenon, bringing it close to the natural influence of geographic and other spatial units on the character of each other. Such interrelated condition of space and text both from the aspect of the spatiality of semiotic phenomena (and the semiotic nature of space itself), and on the other hand also in terms concerning the descriptive techniques of the metalevel, have given reason to use notions and, in point of fact, thereby also to form objects of study like 'the Petersburg Text' and the similar, not to talk about 'textual space', 'cultural space', 'semiotic space of a text', 'semiosphere', etc. (see e.g. Malts 1984; Lotman 1986). However, in spite of the fundamental importance of the two notions, they are far from univocal interpretation or usage even within the Tartu-Moscow semiotic school itself, not to mention wider paradigm of cultural semiotics. This is vividly demonstrated by the undefined 'space' and open-ended 'text' in the conceptual dictionary of the Tartu-Moscow school (Levchenko and Salupere 1999).

The opposite to transformations of the content of loose terms, if wanting to clarify the content of concepts designating spatial units, is over-definition of the relevant terms, which has been also quite a wide-spread practice in spatial studies including both geographical disciplines and also cultural studies of more general nature. By over-defining there has to be kept in mind marking time by continuous over-definition of terms at the scale of whole disciplines. As known, one of the most popular pairs of spatial notions involves 'space' and 'place' that have usually been regarded as explicitly dissimilar and incongruent. Still, from the semiotic viewpoint it seems worth investigating, whether space and place are functionally as different as often treated.

While the semiotic importance of space and place has been recognised practically all through history, there have been distinct periods during which these notions have been paid specifically high attention to, the last decades of the 20th century being one of them. Taking into account exactly the physical aspect as the dominant of spatial understanding, it is possible to outline a contemporary view on the hierarchy of spatial structures. Not only from the semiotic or culturological perspective have spatial units been structured on the basis of their representative power. The fundamental opposition between spatial sphere void of meaning on the one hand and meaningful space, on the other, is often the basis for such categorisation. A. J. Greimas has maintained 'expanse' vs. 'space' as the relevant fundamental opposition. He claims that:

> "If it is the case that every knowledge of the world starts by the projection of the discontinuous on the continuous, we may perhaps return to the old opposition: expanse vs. space in order to say that space, taken in its continuity and its plenitude, filled with natural and artificial objects made present to us by all the sensory channels, can be considered as the *substance* which, once informed and transformed by man, becomes *space*, that is, *form*, capable (through the fact of its articulations) of serving the purpose of signification. Space as form is thus a *construction* which in order to signify selects only certain properties of "real" objects, only some of its possible levels of pertinence: it is evident that every construction is an impoverishment and that most of the richness of the expanse disappears with the emergence of space" (Greimas 1986: 27).

Thus it seems that it should principally be possible to distinguish between the following spatial levels: [expanse] → space → area → region → territory → place [this sequence can be compared to the condensation of semiotic intensity as increasing from the 'cultural text' to a concrete individual 'text']. Unfortunately one has to admit that partially due to the widespread use of these notions they have achieved great vagueness in their meaning(s) as proper scientific terms. With variations, these concepts are in use in human geography, in environmental psychology, in philosophy, and in many other disciplines, not to talk about semiotics. However, it is probably possible to claim that in different fields the relevant distinctions are made on quite similar grounds, namely on the basis of the ability, power and characteristics of a given spatial

structure to represent culture, cultural behaviour, cultural traits. In this line one may postulate 'space' to be connected with more general and primarily cultural developments and aspects, while 'place' would concern aspects of more social nature that would at the same time be more concrete as historical phenomena and events. The distinction between 'space' and 'expanse' makes it possible to talk about 'space' as similar to the concept of the paradigm at the descriptive metacultures. Similarly, we can talk about the cosmic expanse and the discovered galaxies in it as more or less delimited spaces in it that are formed of places in the face of concrete celestial bodies already described to a certain extent. The example of cosmological knowledge demonstrates the evergreen dynamism between the categories and extent of 'expanse', 'space' and 'place' — the size of a 'space' as a vaguely delimited area of potentially reachable knowledge grows (there also exists the possibility of its reduction) as knowledge of its constitutive 'places' becomes more and more refined, and this causes the simultaneous enlargement of the all-surrounding 'expanse'. In a way scientific discoveries like, for example, the Copernican revolution, Einsteinian physics and other ground-breaking corrections to world-view, make understanding of the universe and the semiotic space oscillate, extending and reducing it from time to time. All the more — we can certainly recognise miscellaneous segments of the universe and knowledge of it that human cultures have institutionalised as individual. It is possible to talk about scientific knowledge of the world and the universe, about religious understanding, everyday knowledge and several other dimensions that human mind has divided into distinct. Still, although these segments of knowledge of the universe have mostly been separated institutionally (e.g. different scientific disciplines, miscellaneous walks of life and professions, national, public and state institutions, etc.), they are interconnected, and oscillation of the extent and structural features of one sphere of knowledge often depends on the paradigmatic situation of another. Suchlike segmentation of the semiotic reality and the integral mutual relationships between its segments is brightly illustrated by the evolution of the spatial representation of world-view and during, for instance, the Middle Ages. Due to the religious cultural dominant practically all walks of life were dependent on the canonical interpretation of both the semiotic and physical environment of man. Therefore it not surprising that knowledge of the physical world as interpretable by scientific means or even as monitored by sailors and travellers was either ignored or altered according to the religious conception of the structure of the world and the universe. Likewise were representations of the world not depictions of the physical reality, but rather those of the semiotic one as shaped by religious dogmas. The famous 'T-O map' that lasted for centuries thus demonstrates a most curious dynamism between the physical reality, the semiotic reality and the realm of the reflective knowledge. Furthermore, semiotically this dynamism largely functioned exactly through complex relations between placement and displacement. In order to officially execute coherent interpretation of the physical reality, information on

it had to first be placed into the canonical understanding of the world to test the data, correct and eliminate discrepancies with the integral system of canonical texts. Only after these procedures could textual (both verbal and pictorial) representations of the world be articulated. There is certainly no question about the intellect of the relevant goalkeepers of the time, and the knowledge called objective today was definitely not neglected because of ignorance; cultural space was simply organised according to principles different from the contemporary.

Spatialisation of culture and the culturological dimension of mapping

Of course, space's and place's becoming into the focus of cultural attention has usually been in very evident and strong connection with the abilities, development and possibilities of man's capacity to use space. Such usage can also be split into two, and thus we can make a distinction between the different epochs, keeping in mind which aspects of space have gained importance at the relevant era. The roughly two uses of space are of course physical, material on the one hand, and spiritual on the other. Similarly a distinction can be made between cultural epochs that focus on either spiritual or physical space. For example physical space, or the physical dimension of space, has been important during the era of formation of the cities, during the Age of Discoveries — in a word: during practically all periods of relatively rapid and overall social or sociocultural change (including international wars, world wars, etc.). The spiritual or conceptual dimension of space was of particular importance during the Middle Ages, and in a curious way it has regained its value in contemporary culture; it has always been important in the so-called primitive societies. It maybe not too false to postulate that the spiritual dimension of space and reflection upon the semiotic content of space is paid attention to during relatively calm environment in terms of overt action, but at times of intense travel, discoveries, adventure the mental cultural activity is usually concerned with the interpretation of new geographic and living phenomena from the viewpoint of already legitimised worldview. In other words, during the eras of stabile knowledge about the world sociocultural reflection strives towards, so-to-speak, the text behind text, or the actual meaning or message of the geographic expanse and phenomena inside that expanse. During the Middle Ages the relatively rigid geographic knowledge was expanded into the spiritual dimension, and representation of the world conveyed those meaningful units that were believed to exist in space beginning from spots of importance for cultural history to places and topics of purely religious origin. In suchlike periods, physical geography tends to be but a dimension of space and its importance lies mostly in mediating the 'actual reality' (cf. e.g. several artistic movements). Contrary to these periods, extensive discoveries the results of which are both qualitatively and quantitatively too incongruent with an

established worldview, firstly require (re-) interpretation of the physical dimension of space. Small-scale dissonances that rise from new information of the environment are explainable from the paradigm of a stable worldview, and in fact they thereby favour the development of the mainstream cultural discourse. Contrary to such spiritual or humanitarian interpretation of the world, large-scale stream of new information facilitates the scientific angle of setting 'pieces of the world' into a holistic perspective. At the same time, the invention of new scientific methods and principles of understanding and representing the world does not seem to necessarily involve the regression of the so-called humanitarian trend. For example, discoveries of new geographic areas and methods for setting them in relationships did not cut the Christians off from their religion, but simply drew a more distinct line between the scientific and humanistic (religious, artistic, etc.) interpretative perspectives and subjects.

At the same time it is possible to outline different epochs on the basis of paying attention to spatial structures on the metalevel. It is noteworthy that space has gained higher attention recently. While space has practically always been the subject of analysis, it is the 20th century during which there have been discovered new aspects of space in the physical dimensions (e.g. findings of A. Einstein) and also articulated the value of space as a very special and precious subject of anthropology (e.g. research of C. Lévi-Strauss; see e.g. Lévi-Strauss 1968). It was precisely the anthropological perspective that declared space to be the mirror of culture (while culture being, in C. Kluckhohn's popular formulation from 1961, *Mirror for Man*). When trying to outline concrete persons who have advanced this understanding, then there emerge certain obstacles, since in one way or another, anthropology in its 19th–20th century conceptions has largely treated culture as based on (or even being wholly) the system(s) of adjustment of a biological being, man, to the environment. Culture, man's invented 'unnecessary luxury', if approaching from suchlike viewpoint on man as a biological organism whose primary goal is satisfying needs of physical existence, has been dependent on its ability to adjust to spatial realities. This understanding has been at least partially represented in R. Benedict's (e.g. 1934), C. Kluckhohn's (e.g. 1961), P. Vidal de La Blache's (e.g. 1926), H. Mackinder's (e.g. 1969) works. However, there was also another level to emerge in the anthropological paradigm. This is the one concentrated in the works of C. Lévi-Strauss who maintained that the spatial structure is the mirror of man's semiotic universe. In semiotically even stronger expression, Lévi-Strauss claimed that spatial structure is the crystallisation of a society's sociocultural reality: in spatial structures there have been articulated the social, cultural, cosmological, cosmogonic and other often purely semiotic structures. The positive correlation between the mental processes, be it either on the social level or on that of the individual, and the physical environment the given socium has shaped, goes both for a settlement's general plan, but also for individual buildings and houses (see Lévi-Strauss 1968: 292ff, Lagopoulos 1986). Representation of space, as a process of another direction, loads space

with additional meanings. The tight connection between the geographic and semiotic dimension of culture shows that not only the 'objective content' of space (or place) is important, but the representation of a territory's must include its cultural substance, too. In approximately 1126, Hugh of Saint Victor commented on the target and correct structure of spatial representation, specifically that of the Medieval *mappaemundi*, indicating the importance of space and its spatial representations:

> "We must collect a brief summary of all things … which the mind may grasp and the memory retain with ease. The mind chiefly esteems events by three things: the persons by whom deeds were done, the places in which they were done, and the times when they were done" (cited from Woodward 1987: 290).

This understanding is one of the best explanations for the structure of medieval representation of meaningful space, and these principles have evidently lived long up to our times (e.g. the *Map of the United Nations* from 1945). Thus Hugh of Saint Victor touched upon the important questions of how the semiotic order of space is maintained and transmitted in the course of cultural tradition, different epochs and generations. Such documents of cultural tradition as maps were therefore highly complex, including very diverse semiotic systems (religion, cosmological views, cultural conceptions, etc.) to the representation of space (or: cultural space). In the Middle Ages, space was thereby turned into a mechanism and dimension to integrate different cultural systems according to a given cultural dominant (religion). This, in turn, made the highly integrative representational system complex in the very aspect of contents: spatial representations presumed high knowledge of diverse cultural areas, so that at the interpretation of maps information could be distinguished from elements of noise. It is likely that the cultural mechanisms of coding and maintaining both the spatial order of cultural environment and the meaningful structure(s) of space are directly connected with general principles and factors determining cultural development. Thus it also the use, the ability to handle spatial structures that is vital for cultural survival. Yet the map is not only a description of an area's possessions, but it was, and probably still is, primarily a means for enhancing orientation in both the geographical and conceptual space represented. Examination of a culture's use of space allows us to view those specific semiotic structures that are linked to the identity discourse of a given socium. Analysis of space as the substrate of all the cultural semiotic systems is thus in direct connection with the predictability of the development of different cultures. Besides space as the substrate of culture, spatial structures are those within the limits of which all cultural production 'takes place'. Hereby, another important moment is concerned with what kind of space or spaces a culture can use, uses and does not use. We can notice the critical role of space as the substrate of culture in the aspect of providing culture with new, alternative cultural themes and conceptions. Straightforward examples of the conceptual

conquest of new spaces can be drawn from cases in which the utopian consciousness tries to find articulation. We know that it was T. More who was probably the first to use a specific semiotic technique which is actually inescapable for the enunciation of the utopian or other alternative conceptions of culture and society: it is necessary to find also a new spatial environment for them. This is vital both due to the potential sociocultural, political, physical sanctions, and also for increasing the credibility of discourse. Presentation of new spatial configuration along with alternative cultural conception(s) is also due to the overload of the 'ordinary meaningful space', and that the latter already serves as the substrate and environment of the existing, 'common' semiotic systems. Thus it might be said that (new) conceptual spaces, like new domains of knowledge, are usually a result of a cultural, conceptual conquest which, like in the case military conquest, always entails re-semiotisation of the existing spatial units as well.

Both semiotic and culturological (including historical cartography) treatment of maps has concentrated attention mostly at topics touching, but not quite exceeding the boundary of genuinely semiotic inspection in terms of the diverse aspects of the logic of semiosis and modelling. For example, one can mention a view on the tradition of mapping as a documentary discourse of man's understanding of the nature and laws of his physical environment. This trend of analysis is concerned with the exactness of cartographic description as depending on the evolution of physics, geometry, mathematics and other sciences. The subject matter of cultural epochs comes forward as well, since not during all times has cartography been able to advance together with sciences principally allowing increasingly exact description of the world. This has been the source for numerous treatments of connections between the physical environment, cultural dominants (e.g. religion), and mapping. A specific area of study is formed by the mapping of time, both in the form of the *computus* and celestial maps (for a concise overview of all the trends see Harley and Woodward 1987, 1992, 1994; Woodward and Lewis 1998). In short, different approaches to historical and contemporary maps pay attention to maps as verbal and pictorial representations of geographical, cultural, religious, temporal dimensions of man. Such descriptive discourses, if taken to correspond to the diverse dimensions of the semiotic reality, can be viewed as modes and areas of representation analysis. However, when aiming at more semiotic results, this is not enough. First of all it is obvious that the various aspects of *Weltanschauung* must not be considered individually, but in their synchronic coexistence. For a second point clarification can be found at the close reading of 'representation'. The culturosemiotic analysis of representation as a text depicting something by virtue of its semiotic structure ought to be replaced by understanding representation as a process of modelling driven by sociocultural and spatio-temporal regulations. [In the semiotic context we do not seem to need to stop at problems concerning the representation theory as related to topics like 'presentation' and the 'brain in vat', since this would bring us to the field of

philosophy.] The placement of stress on representation as a process rather than a textual outcome of that process, hints importantly at quite another arrangement of the problem: instead of the 'semiotics of maps', semiotic attitude should centre at the semiotics of space. Now the topic obtains fundamentally different a status, and analysis of maps turns much more provocative and basic for semiotics in general. Approaching maps as representations of modelling space, we are not bound to the textual output of semiogenesis, but are to take much wider semiosic activity into account. From the semiotic perspective, we now are to treat the topic of modelling as the process has to do both with the pre-linguistic, linguistic, and post-linguistic levels of semiotisation. From the culturotheoretical viewpoint, we can now conjoin the biological and sociocultural powers and limitations of man, as treated in the cultural anthropology of the second half of the 20th century (for an overview see e.g. Keesing 1972, 1974), and also in the aspects of possibilities of delimiting cultural areas and epochs. Culturological and semiotic analysis of maps as outcome of multi-level modelling processes should pay attention at least to two fundamental aspects: the nature of maps as representations of understanding the world along with all moments and levels of modelling mentioned above, and the evolution of cartographic semiosis on the level of signs used. There exist several viewpoints from which to analyse mapping culturologically and semiotically. One can approach the history of mapping as the development of diagrammatic semiosis, see it as an evolution of semiosic devices from iconicity and indexicality toward symbolicity, analyse maps as representations of a holistic worldview.

It is clear that maps as visualisations of worldview and educational devices have an immense influence on people's understanding of the world — maps as demonstrative devices provide users with ways of seeing the already known surroundings and also the new that otherwise would hardly be meaningful. In addition, maps have all through the history been used in discourse upon both physical, cultural, political structure of the Earth. Thus let us shortly turn to certain important stages and aspects of the history of mapping that have affected worldview, semiosic regularities and cultural genres (beginning from 'objective description' of known world to utopian discourse) of today's Western civilisation. When considering artefacts, including maps, as representations of semiosic processes, we are to observe modelling (that can, at least in our context, be also termed as diagrammatic semiosis) on different levels: (a) construction of the *Umwelt*, (b) construction of linguistic restrictions and possibilities of using the *Umwelt*, (c) construction of the sociocultural reality, (d) construction of semiotic systems other than language, (e) construction of cultural production by the use of available modelling systems (cf. the above-mentioned stages of globalisation and 'consciousness industry'). On all these levels mapping seems to be both the basic device of organising the structures, and also a possibility of expressing these organisations (e.g. the psycho-linguistic 'map of vowels'). The history of mapping obviously reflects the

development of the mentioned levels of modelling, but it is also clear that these models rarely, if hardly ever, appear in artefacts simultaneously. Early maps that have been discovered seem to represent the physical environs for practical purposes of orientation. They inform us about (pre)historic understanding of the world and man's cartographic abilities to convey geographic information in a certain shared conventional way. It is easy to consider them as indications of the principles of the construction of the geographical *Umwelt* both in the aspect of selecting meaningful elements and representation of them. Maps from prehistory to portolan charts and pilgrim maps are to do with the (a), (d) and (e) levels of modelling, whereas it is hardly possible to reconstruct the sociocultural reality of the community that produced them. Then again, the use of prehistoric maps for reconstruction of worldview depends on the function a contemporary researcher ascribes to them: if one views prehistoric maps not only as depictions of a certain geographical area, but as representations of the living-space of a certain community, it would already be possible to speculate on the oikumenic cosmology of the given past sociocultural unit. Function attribution, in turn, is made difficult and often tricky by the material features of maps. It is pretty clear that for the longer period of their history, people had, besides their own biological constitution, only natural objects to use as carriers transferring knowledge. Therefore the material nature of objects used for mapping is not as informative in terms of having been selected for representation of mythological, cosmological, cosmogonic and other cultural realms as in the case of e.g. shamanistic cartographic tools. Until times those of parchment, vellum, and the similar, not to talk about paper, it is impossible to distinguish between different realms of representation according to materials used. Still other problems concern the sociocultural segmentation of worldview and the very possibilities of identifying the segments: it is probably impossible to make a clear-cut division between mapping of geographical, cultural, temporary and other dimensions of the semiotic reality of a socium until modern history and mapping that by now has grown into quite diverse geographies (e.g. physical, political, mineral, cultural, social and other divisions of maps). Separation of maps representing either physical environment or the semiotic reality of a society is by far not an easy task until recent history. A possibility to distinguish between different types of maps and their areas of representation respectively could be their function in culture. Yet uses of maps point at their functional polyvalence (e.g. maps on Ancient coins can, similarly to the evangelic interpretation of an emperor's portrait, hint at declarations of possession both culturally, socially, and geographically) that can be interpreted as an obstacle for evaluating their representativeness against the background of their cultural context. For example, if sharing an opinion of J.G. Gregorii (*Curieuse Gedanken*, 1713), we could describe the map "[...] as a painting representing the Earth or its parts artificially on the surface" (cited from Skelton 1952: 20), and thereby lose all possibilities of weighing the cultural or cartographic value of individual maps in terms of precision. However, it is the difficulty and resource

consuming nature of maps that turns them into semiotically valuable for being social representations rather than individual artworks.

The art of mapping: Cartography and chorography

At this point it seems useful to review certain convictions that apparently have limited the range of material considered as cartographic and also methods applied to maps in culturological and semiotic studies. In the light of the above, it seems pointless to approach representation of the world from the standpoint of correctness or evaluation of maps on the basis of truth or their correspondence to physical reality. The truth-value of maps can be associated with the different types and purposes of them (e.g. the tripartite, quadripartite, zonal, transitional types, portolan maps, road maps, regional maps, etc.). However, it seems that the different types of maps are to be viewed in terms of functional intentions that are connected with their formal constitution, rather than with differences in objects represented. It is possible to find differences in stress and amount of objects of various classes ranging from the natural to the imaginary, but it is the representational technique that determines their semiotic status, thereby also the semiotic intention of a given map. Mapmaking seems to have regularly been balancing between 'cartography proper' and chorography, and it is very difficult to outline exact periods of the domination of one or the other, since on the one hand such differentiation depends on understanding what is meant by 'scientific discourse', and on the other hand chorographic features can be met in practically any map on the level of signs. The semiotic nature of signs in maps involves indexic, iconic and symbolic dimensions also in the period of cartographic conventional signs that seem to have found their beginning in Philipp Apian's map of Bavara in published in Ingolstadt AD 1568 (Skelton 1952: 11). Cartography has usually been associated with scientific features in contrast to chorography. A semiotic definition shares the following view:

> "Cartography is a discipline which belongs to that part of graphic communication addressing the visual channel which is concerned with the transmission of (scientific) data or other information in contrast to artistic graphics transmitting aesthetic information" (Krampen 1986: 98).

Without an explicit reference to geographical data, this is quite a general and vague definition that may be applied to a variety of the outcome of diagrammatic semiosis. However, if considering geographical information, the balance between the 'scientific' and the 'artistic' starts to blur, especially when turning to the medieval sources of modern cartography: the medieval translation of 'geography' as a word derived from Greek was '*orbis* description' (on the matter see e.g. Lozovsky 2000: 3), and such a connection shortens distance between 'cartography' and 'chorography' as well. According to Lozovsky,

chorograpia, as the description of places, has one of its first appearances in a ninth-century manuscript of Pomponius Mela with the original dating back to the first century (Lozovsky 2000: 9–10). Places, however, are not characterisable by their mere geometry, but mostly by the cultural activities that have shaped them (cf. e.g. the above cited opinion of the goals of mapping by Hugh of Saint Victor). Thus, as put by H. Marchitello:

> "Chorography is the typically narrative and only occasionally graphic practice of delineating topography not exclusively as it exists in the present moment but as it has existed historically as well. This means not only describing surface features of the land (rivers, forests, etc.) but also the 'place' a given locale has held in history, including the languages spoken there, the customs of its people, material artefacts the land may hold, etc." (Marchitello 1997: 22).

Chorography, then, occurs as representation of the Earth in terms of cultural spaces or sociocultural chronotopes, inclining toward diachronic, rather than synchronic description. The purpose of chorographic discourse is to disclose what lies behind the physical geographic appearances that mostly screen the 'actual contents' of reality. This, however, can not be regarded as a factor subjecting chorography to aesthetic discourse instead of science: the situation is similar to early abstractionism and its aims as declared by e.g. P. Mondrian, F. Marc, W. Worringer and others in the beginning of the 20th century. The aim of mapping until the modern times was, at least beginning from the Middle Ages, in a sense more complex than today, since single artefacts were to represent quite numerous dimensions and phenomena included in spatial units. Aesthetic representation and artistic details in maps helped to encode diverse information into complex signs and images, being also powerful educational and evocative devices. Description of spatial units in the chorographic diversity of objects may also be rendered as a proof of mapmakers being conscious of the cultural influence on both spatial modelling and the usage of maps as spatial models. The seemingly artistic elements in maps from the Middle Ages to occasional contemporary instances (e.g. O. Soans' culturo-historical maps of Estonia) that include the representation of historical and imaginary figures, events, beings and phenomena reveal that such maps did not have the pretension to try to describe the 'objective physical reality', but were intended to transmit sociocultural facts in their semiotised geographical context. At the same time, since sociocultural facts are socially contracted and established facts of historical, physical, social, semiotic phenomena, mapping was both cultural and metacultural socially organised activity that thus belonged to what today is understood by 'scientific discourse'.

A potential decision to label sea and land monsters, antipodes and the like as redundant or noisy elements is hasty from the aspect of the emergence of such phenomena out of the actually encountered beings and objects. The switching of the non-oikumenic elements into cultural discourse was to get help from the

already existing elements and semiotic devices, be them mythical, religious, or *ad hoc* imaginary. Understanding the savage had to proceed via the generation of intermediary meaningful structures, be them new invented races, fauna or other marvels that helped to cognise new experience as based on the actually existing.

In addition to these seeming peculiarities of early maps that were connected with this semiotic technique, be it conscious or non-conscious, there is another reason to doubt the setting of creatures and objects invented and represented in maps into the purely artistic discourse with only an aesthetic value. This concerns especially the time preceding the introduction of cartographic conventional signs when e.g. sea monsters could also be symbolic indexes of dangerous waters, functioning by iconic similarity anchored in mythological consciousness. Therefore the degree of cultural and semiotic competence that guides also the interpretation of cartographic maps in terms of judging the balance between the iconic, indexic and symbolic dimensions of a sign, influences attitude to either scientific or aesthetic reading of maps. This applies to any era of mapping and, needless to say, the scientific and the aesthetic are not to be treated as mutually exclusive. Distinguishing between maps on the basis of accuracy, as connected with the opposition 'scientific—artistic', seems to be at least partially rooted in the etymological background. The Medieval classification of arts and sciences is related to the ancient terminology in which the arts were related to *techne* as professional skill or ability. Thus art as a technique or a skill was not to be understood as separated from sciences, and mapmaking belonged into the latter as an ability to protrude into the meaningfulness of the visible geographic extents and objects. These aspects of the status of geographic disciplines have been treated by E.A. Melnikova (1998) who, following H.v. Eicken, refers to a letter by Gilbert of Poitiers to St. Bernard of Clairvaux about science that must lead:

> "[...] to super-worldly, holy and deepest secrets, to the intimate and pleasing abysses of ins and outs, to the unattainable light in which there lives God. This art I can name the art of all arts" (Melnikova 1998: 28).

Thus the above-cited opinion of M. Krampen cannot be regarded as suitable for general and historical inspection of actual maps and other specimens of mapping. Without speaking of mapping until the end of the 19th century, even if considering contemporary branches of mapping (e.g. maps of minerals, political regions, nations, etc.) so as opposed to mapping regions in complex manner (e.g. general maps, tourist maps, etc.), we confront confusion when trying to define the status of a concrete map on the axis of 'scientific—aesthetic'. For example, it is already the object of a certain cartographic work trying to transmit cultural features of an area that often imposes 'non-scientific' characteristics of mapping as a metalevel activity (e.g. the UN map from AD 1945). However, inasmuch as contemporary environmental features can largely already be interpreted as reflecting characteristics of culture areas, we find connotations of

geographic information with the semiotic and behavioural habits of culture bearers in a given region. Therefore the current work cannot share the view of Krampen that "[...] in contrast to diagrams and networks, the signified of maps is limited: it is confined to the universe of geographic information" (Krampen 1986: 98), if not considering the cultural aspects of that information as connected also with the aesthetic dimension. The semiotic status of a map is largely determined by conceiving balance between the scientific and the aesthetic in it. However, one could propose that it is not that much a matter of opposition between the scientific and the artistic, but rather one having to do with era-specific segmentation of knowledge that is reflected in the division of disciplines according to their area of study. It is especially the early maps that reveal unified representation of knowledge that had fluid boundary between the humanities and the hard sciences, and such maps demonstrate the dependence of knowledge of the world and the representation of it on the 'correct' understanding of the functioning of the world as explained (always ideologically) in humanitarian discourse. Indeed: the goal of geography of at least the medieval times being description of *orbis terrarum*, the medieval audience, according to Lozovsky, "[...] would most likely perceive this subject as part of *physica*, knowledge about the created world" (Lozovsky 2000: 29), we are but to lay stress on the notion of 'the created world' as it is related to religious understanding. Lozovsky refers to Dicuil who connected the measurement of the provinces of the earth with "[...] knowledge about the created, corporeal, visible world" (ibid.) that was to consider seven descriptive features: seas, islands, mountains, provinces, cities, rivers, and nations (ibid.). Even if taking the natural items of the Earth as belonging to the so-to-speak strictly objective scientific discourse, what connects with the nations has already directly to do with subjective definitions (see e.g. Gellner's characterisation of the 'nation' (Gellner 1983: 7). On the other hand, while medieval geographic discussions were largely canonically determined, their aim was not a one-way support to religion: the immanent connection of geography as pertaining to the study of environment and the religiously coded semiotic reality implied also a biased engagement of 'hard science' into the teleologically correct understanding of the universe. A significant part of describing *orbis terrarum* was the chorographic explanation of places; this turned place names into highly condensed data packages (which could be expressed, besides the verbal, also by other sign systems). Lozovsky quotes Jerome on the matter of the simultaneity of the geographical, the humanly understandable, the divine, and the humane need of grasping the essence of the universe — comprehension of place names is a way to conjoin these facets:

> "He who has seen Judea with his own eyes, and who then knows the sites of ancient cities and places and their names, whether the same or changed, will gaze more clearly upon Holy Scriptures" (Lozovsky 2000: 49).

On the one hand we can witness, by this quotation, that a reason for the Medieval maps being so resistant to changes about the actual geographic information about the world was the latter's inconsequential role for orientation in the semiotic reality. On the other hand this citation adds a new perspective to understanding the status of the so-called road maps of the medieval time: being directive help for travellers, they provided paths also for those unable to undertake a physical pilgrimage themselves. This function adds an extremely important perspective to reasoning the specific ideological content of maps and deepening of the Eurocentric worldview, since similar tendencies can be noted also in other types of maps.

Maps, especially worldmaps, reveal incredible amount of data on the spatiotemporal construction of the semiotic reality and the sociocultural institutions for maintaining, sharing and transmitting worldview. At the same time they entail actual difficulties emerging at trials of reconstructing both the intended contents of the *mappaemundi*, and restoring world models on their basis, that in turn could help to understand individual artefacts (including maps) of a concrete cultural era. In the beginning of the current work there were indicated a few examples of works in the history of cartography that have treated worldmaps so as having their roots in the Middle Ages, having done it mostly in descriptive manner. One can hardly bring forward a semiotic tradition of analysing of *mappaemundi*, especially when laying stress on such maps as material for cultural typology or artefacts disclosing sociocultural systems together with their sub-semiotic systems in a polydimensional way. It is important to be aware of that the reconstruction of the evolution of mapping is quite arbitrary, because the huge quantity of cartographic material lost in the cause of history. The vanishing of maps has been due to the very purpose of them (extensive use in practical life) and their material (affecting especially papyrus and parchment). As known, it was only in the times of the Renaissance mankind started to value and purposefully collect artefacts, and thus is it largely beginning from that we can name first collections of maps as well. In the end, of course, collecting may be interpreted as making it possible to destroy large amounts of artefacts momentarily, as it happened also to hundreds of pre-medieval, medieval and later maps during WW II (for a statistical overview see Codazzi 1947–49). Furthermore, in the case of the approximately 900 preserved *mappaemundi* we face exactly those that deserved the attention of the kings, princes, dilettanti and scholars because of the decorative beauty, historical appeal, weirdness or simply antiquity (for such a sceptical account see Skelton 1952: 24). Thus, while maps are very informative in their semiotic power both on the account of the semiotic reality of epochs and also specific uses of available sign systems, we can never evaluate their representativeness in respect to the whole cartographic production. Nevertheless it is possible to detect continuity in the semiotic devices and habits of cartographic description as traceable in all Western cartographic history until nowadays; there exist, in Geimas' terms, internal referents (Greimas 1990: 24) and stabile methods of

representation that allow us to talk about the (European) tradition of mapping as a continuous cultural discourse.

It is obvious, as mentioned above, that maps as representations of the humane environment are in connection with and represent man's understanding of the nature and structure of his surroundings. Therefore the history of mapping inevitably mirrors also the development of science and worldview. At the same time the development of science is tightly bound with the limits of *Weltanschauung* in the merely ideological aspects. In this sense, be it religion, political doctrine or faith in science, maps represent the fact that representation and understanding of the world is dependent on the boundaries of man's semiotic reality. Now, taking the Middle Ages, as historically still most representative in respect of the cartographic material preserved, as the era on which contemporary cartography and culture are based, we are but to maintain Christianity as the cultural dominant that governed all cultural production, including that of mapping. Let us shortly repeat some basic facts and circumstances that have quite widely been treated in the historical cartography, but are of key importance for the semiotic analysis of maps as well.

The geographic structure, cultural and social contents of the world: **Mappaemundi**

A key notion, when inspecting the Medieval *mappaemundi*, is of course the T-O structure of maps, the one giving rise to the notion of the "T-O map" as a general designator of Medieval mapping. In spite of the manifold treatment of the topic in the history of cartography, it is important for the following to reiterate some basic features of the *mappaemundi*. The T-O arrangement of *orbis terrarum* in maps refers to such depiction of the world in which the Earth is divided by the rivers Don and Nile, and the Mediterranean Sea into three continents surrounded by World River (see fig. 4a, 4b).
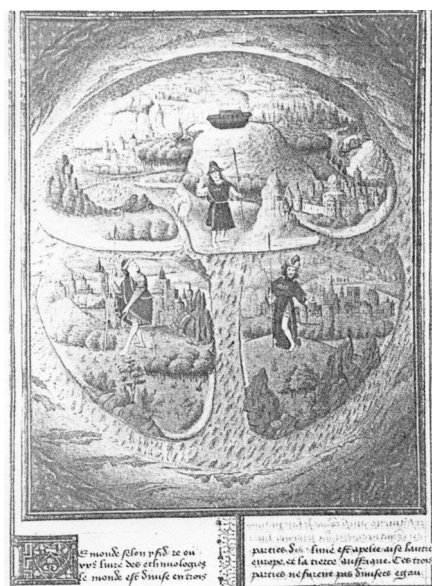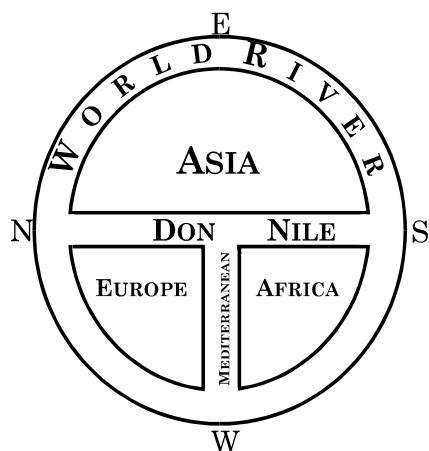
Figure 4a; 4b. T-O diagram. J. Mansel's manuscrip *La fleur des histoires*, 15th cent.

The motif of the World River surrounding the inhabited world, and leaving the unknown or inhuman out of reach, or vice versa, into safe distance, has to do with mythological structures preceding Christianity, having its Medieval roots at least in the Antique oikumenic worldview. The division of the planet into three continents, however, comes from the interpretation, or rather, illustration of the Holy Script (Genesis 1: 9, 10). Maps of the world were visually organised also according to religious understanding: the East was on the top and the Mediterranean thus formed the vertical bar of the T (sometimes having also the shape of Y). From the semiotic viewpoint probably the most interesting aspect that had an immense influence on mapping and other cultural production for very long, is the three-partite world together with the surrounding World River that formed a clear-cut (although, as it will be shown below, not quite) boundary of the oikumene. An inheritance from the Antiquity — the climatic (zonal) model of the world (see fig. 5) — influenced the comprehension of the oikumenic boundaries in terms of habitable areas, and assisted to the oikumenic (and further on, Eurocentric) image of the world.
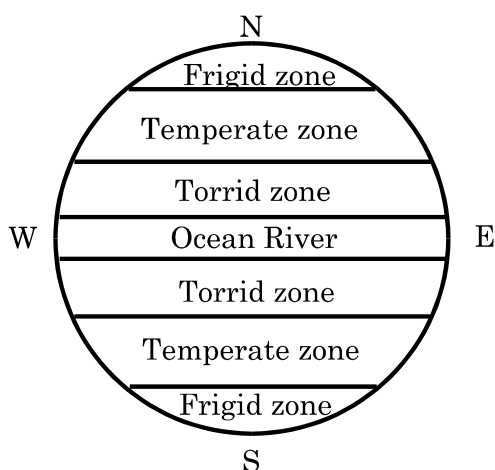
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Figure 5. Zonal-climatic divisions of the world.

In principle one can maintain that the tripartite and zonal model were ideologically conjoined: both essentially delimited the 'habitable world' as opposed to the 'other', doing it both in terms of reason and humanity (the tripartite or T-O map), and in terms of defining areas life could be biologically possible (the zonal map). Without longer excursions, we can recognise at least two most important topics having to do not only with representing, but also understanding and transmitting the oikumenic worldview dominated by religion (and later variations of it). Both of them are to do with organisation of space according to the oikumenic principle, and are in fundamental interconnection with each other. The first aspect is concerned with the reasoning and visualisation of the tripartite world, which is due to the division of the world between the tree sons of Noah (see fig. 4b). The second moment has to do with the centrifugal (or centripetal, if interpreted in another direction) nature of the universe.

As mentioned, in T-O maps the world was depicted eastwards-up with Jerusalem in its centre, which, of course, is nothing but a variation of the Antique vision of the oikumene. As known, the *mappaemundi* depicted not only the structures available for man in his sensory abilities, but also those of purely religious nature. So, for example we can usually see Paradise on the top of *mappaemundi*. Paradise, together with the many other places and structures not yet certified to situate on the Earth, appear in worldmaps on regular basis. Before admitting the religious roots and needs for suchkind elements, let us again remind of that in representations the world was eastside-up, and none of explorers had made his journey up in order to either verify or disregard the assumption of Paradise topping the world (cf. Genesis 2:8–2.10). From the contemporary viewpoint, it may seem strange that the top of the Earth, i.e. the East, was this unexplored, but from the Medieval canonical standpoint there

was no need for that. Furthermore, as we will soon see, it was nearly unavoidable for the good Christians not to be interested in the exploration of faraway lands and to switch them into their worldview. Appropriate knowledge of the world, i.e. cultural competence, was to surpass non-canonical information already on the level of school, not to talk about oikumenic reflections on the universe by the authorities. Bede comments on the inaccessibility of the divine places:

> "[...] only God would know whether it [Paradise] is there or elsewhere; however, we cannot doubt that this place existed and continues to exist on earth" (cited from Lozovsky 2000: 55).

An example of the canonical model of the world as it governed the educational system of the Middle Ages, is reflected also in a record from the 8th or 9th century school text about a student asked about the provinces of Asia. According to Lozovsky, that schoolbook departed from the Isidorean world model, leading the answer of the student to that the parts of Asia are "Paradise, India, Aracusia" (ibid.).

The placement of Paradise into physical reality is but one instance of the fusion of the purely semiotic reality with concrete referents. By the help of *mappaemundi* one can get acquainted with the location of Gog and Magog, Prince John and other legendary figures and places, not to talk about the whole variety of land and sea monsters. In pragmatic aspects this is largely due to that maps mostly served as illustrations in both religious and encyclopaedic works. Maps functioned as redundant representations, increasing probable efficiency in the transmission of knowledge about the physical world and semiotic reality, being at the same time unique culture-bearers on their own. Maps as spatial representations point vividly out both the importance of spatio-visual meaning carriers, and also the function of space as a substrate of culture. The semiotic reality of a society does not only comprise spatial units in terms of concrete reference, but anchors also its purely semiotic structures to space. It is this logic that is explicated in representations that allows us to describe sociocultural units in terms of cultural spaces.

Such a logic of the mind describes lucidly the contents of Medieval maps: we can meet both realistic and legendary figures, phenomena, places and on the other hand — inasmuch as events recorded represent, besides fiction, also history — the *mappaemundi* recorded also the flow of time. Description of places was important also because, as N. Lozovsky notes, they provide "[...] a physical link between the divine and the human, which often corresponds, respectively, to the past and the present" (Lozovsky 2000: 92). The complex nature of what had to be represented in maps brought about extensive use of verbal discourse that supported the pictorial, extending sometimes the mere function *anchorage* to the construction nearly all of a cartographic work in words (e.g. a verbal Psalter Map from ca 12th–13th cent.). The sometimes-redundant relation between signification in pictorial and verbal discourse was to

assure successful transmission of cultural memory. Such a device of doubling information was consciously valued, e.g. Fra Paolino Veneto, an early 14th century Minorite friar, maintained that:

> "I think that it is not just difficult but impossible without a worldmap to make [oneself] an image of, or even for the mind to grasp, what is said of the children and grandchildren of Noah and of the Four Kingdoms and other nations and regions, both in divine and human writings. There is needed moreover a twofold map, [composed] of painting and writing. Nor wilt thou deem one sufficient without the other, because painting without writing indicates regions or nations unclearly, [and] writing without the aid of painting truly does not mark the boundaries of the provinces of a region in their various parts sufficiently [clearly] for them to be described almost at a glance" (cited from Woodward 1987: 287).

Thus, examining the *mappaemundi* semiotically, we witness very elaborate application of several sign systems supporting each other at maximising the probability of interpretation of maps in line with the intention of the author(s). Giving directions for correct interpretation by the simultaneous use of the verbal and the pictorial signs is very often used also by the semantic contextualisation of maps: numerous examples can be drawn of e.g. Christ embracing the world, excerpts from Bible surrounding the map, and the similar. Scientific, philosophical, religious contextualisation of maps survived many centuries, reaching e.g. explanation of the world by pointing out the constitutive elements of the Earth (water, air, fire and soil in the four corners of maps; cf. e.g. worldmap by H. Hondius from 1630, etc.). This means that the complementary nature of semiotic systems does not concern only the encoding mechanisms, but also the cultural modelling systems by their division according to referential realms: cultural spaces are outlined by the simultaneous exploitation of religious, scientific, and other discourses. Further still, intersemiotic semiotisation is active also on the very level of individual signs used in maps — in most cases we can identify both indexic, iconic and symbolic dimensions of cartographic signs — a topic to be discussed below.

The use of several modelling systems and their specific location on maps makes us to return to the structure of *mappaemundi* described above. The oikumenic organisation of representations of the world was, of course, stressed by the overall symbolism of the T-O maps (the surrounding World River as the O representing the ideal form, protected zone and the similar, the T recalling of the cross) which was a set of the so-called macrosignifieds (see Danesi and Perron 1999: 293–301) of the era (cf. the royal orb). Additionally, we can observe several other devices connected with the concentric worldview amongst which there exist both explicit and seemingly implicit ones. The first explication of oikumenic understanding of the world and its concentric representation is of course organisation of the European cultural space around the focal point — Jerusalem [cf. Lozovsky's hint at a medieval commentary:

"Paradise 'was where the Holy City Jerusalem is now, since it is only twenty miles from where Adam is buried" (Lozovsky 2000: 61)]. This links the representation of the Earth with the representation of the universe, since Jerusalem, as the mirror-city of the Heavenly Jerusalem, indicates its being the centre of the world, while its Heavenly Twin pinpoints the middle-point of the Universe. The logic of understanding the locations in such manner seems to significantly hook up with the principles of mapping as depending on horizontal and vertical perpendicularity described above.

It seems logical that, if describing the world oikumenically, the discourse is built on the opposition 'culture' vs. 'non-culture'. While the core of the 'cultural' has to do with Jerusalem as the mirror of the emanation point of the universe, the farther away from it, the more of the 'non-cultural' there is in the peripheral areas of both the universe and the world. It is a special topic whether we can equalise the 'non-cultural' with the meaningless, and we will deal with this below. Currently we can just maintain that the *mappaemundi* expressed both the concentration of the cultural and the meaningful in Jerusalem, and while these features decreased the more towards the 'end of the world' we move on the map, the more pointless our journey becomes. For example, if we view the Ebstorf worldmap (one of the victims of WW II), we can observe explicit warnings of the danger or at least emptiness lying beyond the known world: "Non plus ultra" — "There is nothing beyond". The void of meaning does not derive only from the unexplored or the physically not yet reached character of lands outside the oikumene. It is unambiguously connected also with what is represented by the contextual frame of the map — Christ embracing the world — on the verge of which the inscription is placed (at the feet of Christ at Gibraltar). The inscription reflects both geographic and semiotic limitations of the Christian world which people could not, as put by S.Y. Edgerton, "[...] think seriously of sailing away through the Pillars of Hercules, because that too could mean abandoning the Body of Christ" (Edgerton 1987: 29). Furthermore, in addition to the fundamental isomorphism between the structure of the world and the universe, there existed isomorphic understanding of the world and man as well. This is expressed also by the style to represent the world via the body of Christ, and inasmuch as man was believed to have been created in the face of God, the similarity of macrocosm and microcosm is obvious. Therefore the borders of the world had to be regarded also as the boundaries of humanity in both geographic and purely semiotic terms. The map as representation of the Christian oikumene had to facilitate man's orientation in both physical and semiotic reality, just as well as in himself.

In addition to the above-described means of expressing the Eurocentric worldview oikumenically, there can also be mentioned the character of individual cartographic signifiers. This has similarly to do with axial and concentric image of the world whereby movement from the centre towards the periphery corresponds to moving from the, in a manner of speaking, sensibly structured meaningful realm towards the 'non-cultural'. Jerusalem, by being in

perpendicular axial correspondence with its Heavenly Twin, embodies the semiotically most condensed part of Corpus Domini, and the further away from it, the more we witness the emergence of the 'weird', 'savage', 'inhuman' in *mappaemundi*. This, however, does not imply the equalisation of the peripheral with the 'meaningless', but rather with that of the 'non-cultural': what remained in the periphery or the outside of the oikumene, was semiotically obscurely presumable, yet it had to be avoided as not included in Corpus Domini. For example, while the central part of (European) maps represents space by icons of cities and kingdoms, peripheral areas contain images of sea and land monsters, fictional characters and the similar. Hereby we can stress two aspects of this phenomenon: on the one hand the very filling of space with signifiers calls for analysis of their referential subject topics in general (e.g. relations between the real and the fictional), and on the other hand attention is to be paid to the semiotic mechanism of their signification (whether semiotisation follows the schemes of similarity, juxtaposition, or conventionality). These two topics do not seem to be solvable tightly together, because the referential objects of cartographic signs need not to be in correspondence with coherent or continual habits of iconicity, indexicality or symbolicity. In Peircean vocabulary, the relation ascribed to the representamen and the object depends on the interpretant which is formed by the specific nature of the pragmatic function assigned to a map or its individual parts or signs in every individual case of usage.

The conception of the *Corpus Domini* together with the Biblical explanation of the division of the world into three among Noah's sons met essential need of adjustment as actual knowledge of the physical environment of the European man extended. In spite of casual travels and war journeys that widened the acquaintance of permanent settlement people in the lexical mode, worldview did not obtain firm conceptual representational establishment until the period of the *mappaemundi*. Regardless of the Ptolemaic science-based method of mapping, the contents of the world was determined by the religious code, and its encyclopaedic enlargement was neither possible nor necessary until the advancement of European technology to the level allowing travels farther. Technological improvement, on the other hand, seems to have made corrections into the canonical worldview: while medieval worldmaps were representations of the *Corpus Domini*, during the Renaissance there emerged new drives for the exploration of the geographic reality that were yet governed by Christian ideology, although in a somewhat twisted manner. As S.Y. Edgerton notes:

> "Philip, like his father the emperor Charles V, believed absolutely that it was
> also his divine mission to extend Christian empire to the farthest corners of
> the earth. Charles had adopted and passed on to his son as imperial insignia
> the very emblem of the Pillars of Hercules, but he dropped the word *non*
> from the original motto, allowing a completely new translation of the old
> meaning. Now the king interpreted the remaining Latin words, *Plus ultra*, as
> urging "Push forward", "Adventure westward beyond the Pillars" (Edgerton
> 1987: 48).

It can be suggested that the aim of the *mappaemundi* was not only description but also, maybe even more importantly, explanation of the world. Medieval worldmaps were not just to describe the geographical surroundings of man for his orientational goals, but rather to explain him his position in the world and the universe the physical dimension of which was far from being of primary importance. The above-cited opinion of Hugh of St. Victor was preceded by a logic of map composition, which was followed by one of the most famous medieval scholars, St. Isidore. His ideas on expressing knowledge of the world did not contradict the itemised demand of Hugh of St. Victor, but were of systematic help that could be applied to the later detailed list of the contents of the world. St. Isidore's line of thought is expressed also in the titles of one of the most influential medieval works composed by him: *Etymologiarum sive Originum Libri XX*. For Isidore, adequate description of the world could only proceed through the explanation of the meanings of proper names, for etymologies can reveal the origin and causes of names and words by which we operate with the environment. The true nature of objects in the referential reality can be elucidated by the explanation of meanings and significative origins of names. In an interesting manner, Isidore's world is separated into several individual parallel realms according to the quite resisting view by which the world is consituted by four primordial elements. Thus there appeared at least three descriptive categories (humans, geographical regions, and waterbodies; cf. Lozovsky 2000: 103–113). On the one hand this may seem destructive, on the other hand these realms represent but aspects of one and the same reality; categorisation of the environment into discrete subclasses can be explained by the ideology of explaining the world as consisting of the four basic elements (earth, water, air and fire). Furthermore, Isidore unites descriptions of the different realms, just like he practically conjoins the historical and the geographical by the very logic of his etymological approach — in his words "[...] the nations originate from languages, not languages from nations. […] And the earth is divided by nations" (cited from Lozovsky 2000: 106). Besides certain generic instances, this is a fine example of the synchronisation of the linguistic and the geographical conception of the oikumene: in principle it must have been the case that all nation and languages share the same root. Thus the languages understandable for the peoples of the oikumene form the core of the cultural, which is supported by the geographically concentric layout of the cultural. The further from the centre the more unknown became the environment, the less were understandable the (possible) sign systems of the 'others'. Interestingly, such a formula may be worked out on the metalevel and applied on the socii analysed, but obviously, when taking the approach from the viewpoint of a culture inspected, it was indeed difficult, if not impossible, to bring that which was not comprehensible or even non-existent in knowledge, into cultural discourse. Thus the opposition 'cultural—non-cultural' may not be taken as a mere metaphor or a culturosemiotic analytic device.

The linguistic aspect of the oikumenic ideology illustrates well also the situation that emerged alongside with the growth in the Europeans' knowledge of the physical contents of the world. Together with the unusual exotic beings and phenomena that started to shock European cultural consciousness, there emerged the need for the explanation of the fitness of weird creatures in *Corpus Domini*. First meetings with e.g. the African fauna created a situation that lead to a sort of cultural explosion in the aspect of fictional discourse that found output in the face of the new genre of bestiaries. Contacts with savage beasts, however, were not of crucial influence on the European *Weltanschauung*: the oikumenic image of the world had to be re-evaluated and re-arranged after contacts with other human races increased. The existence of a numbered amount of people covered with black skin would probably not have brought along radical changes in the European worldview, but as convincement grew that the case was not about individual anomalies but maybe about an entire 'other' race, both the geographical image of the world and the semiotic reality had to be re-structured.

The problem brought along by African peoples was again connected with the *Corpus Domini* as presented in the Holy Scriptures: if the world had been divided between the three sons of Noah and all mankind descended from them, then how to explain the obvious and substantial differing of the Africans from the white-skinned Europeans? Black people did not possess comprehensible linguistic abilities, they lived amongst monstrous beasts and weird flora — all this set under question both the position of the Europeans themselves in the divine universe, and the advisable attitude to the weird races and monstrous natural phenomena. The problem was of vitally essential importance and had many critical facets amongst which a few can be mentioned. Have the Scriptures been distorted so that the description of the 'others' had been lost? Then there would be no guarantee that other parts of Biblical information had fully preserved, and the religious norms for culturally successful behaviour may not lead to Paradise. How to solve the problem of the oikumene and its representation? If the entire world is inhabited by the kins of Noah and there evidently exist creatures only very remotely resembling that kinship, is the world to be replenished and a fourth continent added? Does the very remote similarity of the Africans to the Europeans mean that they belong to the human race as extreme mutated cases, rather than to animal species? A question of paramount importance was: what attitude to take towards other races in terms of practical action? Both merchandise and coming to convincement in that all races must be evangelised influenced deeply the understanding of the structure of the world and roles and status of Europeans. The roots of contemporary globalisation are implanted in that era and culture themes. All questions indicated above were connected to practically all walks of knowledge, thinking and scholarship in an interconnected manner, while the basic contradictions lied in the relationship between the semiotic and the geographic. Needless to note that the solution to be made was to influence not only scholarly discussions, but

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also the educational curricula that shaped next generations. Still before there collided economic and colonial interests: if weird races were non-human, there would be no need to explain their exploitation, but on the other hand, if they really could by some incidence be related to the human race, then they must be evangelised (according to Melnikova the first expedition dedicated to purely scientific and geographic goals, took place not before the middle of the 18th century; see Melnikova 1998: 32). Thus the invasion of faraway places, beginning from Africa, was of an utmostly natural concern for Europeans. In a maybe curious manner, such an invasion was two-faceted as well: on the one hand the oikumenic representation of the world had to be proved as the right one, and on other hand the peoples from the outside were to be evangelised. Economically it was of course more useful to treat 'other' races as deviant forms of Noah's children, for this opened the way for easy justification of evangelisation missions followed by other forms of invasion; if the other races had been categorised as non-human, there would have been nobody to turn into Christianity (see Williams 1997: 21).

As mentioned above, increasing contacts with astounding phenomena brought along, together with growth in geographical knowledge and extension of the physical boundaries of the oikumene, also quantitative and qualitative rise of the European semiotic reality. Qualitative changes are represented by typologically new elements that were switched into cultural discourse, and new genres in which they were expressed. Besides serious religious dilemmas that had to be solved, there appeared the need for a so-to-speak literary description of the new elements found in the nature of Africa and other regions. Thus the appearance of encyclopaedias (together with explanatory worldmaps) seems to be quite organic. If we stop at the example of biological beings rendered as remotely related to the 'normal humans', we can notice several most significant aspects concerning the development of the Eurocentric semiotic reality. The treatment of the 'almost-humans' was not limited to encyclopaedic description because, mainly due to religious concerns, there was needed an explanation as well. Such religious and philosophical glasses through which the oikumenic discourse treated 'other' phenomena, gave soon rise to a new, or at least a new level of the genre of the utopia. Being originally a helpful device for supporting the established religious worldview, it fairly soon became into a means of expressing alternative sociocultural conceptions by the help of spatial remoteness.

From new places to alternative spaces, culture themes and conceptions

The interpretation of new races and places reported and/or found by the Europeans can be treated in the light of such unilateral semiotisation, or non-primary communication that has been related to the invention approach (see Marcus 1992: 137–138). The extraordinary places filled with phenomena not

encountered ever before favoured synchronic interpretation of space and what it contained, beginning from novel species to human groups whose behaviour was regular and co-ordinated enough in order to be interpreted in patterns. The actually found new places and species, and patterned behaviour associable with a certain culture opened way for hypotheses about the existence of additional areas and species to be discovered yet. Thus the beginning of the Western culture's genre of the utopia can directly be connected with trials to explain the structure of the Earth as connected with the newly found races that had to be explained in order to preserve the oikumenic worldview dominated by the religious code-text. Although it is difficult to trace the origin of the beginning of changes in the rigidly tri-partite world, it is possible to refer to Liébana's Beatus whose ideas of explaining weird phenomena by changes in the spatial representation of the world can be noticed in some of the extant *mappaemundi*. As it is well-known and widely discussed, the problem of unexplainable features of 'other' races and phenomena was solved, as represented in Beatus' worldmap (see fig. 6), by the invention of the so-called Fourth Continent and the term 'antipodes'.
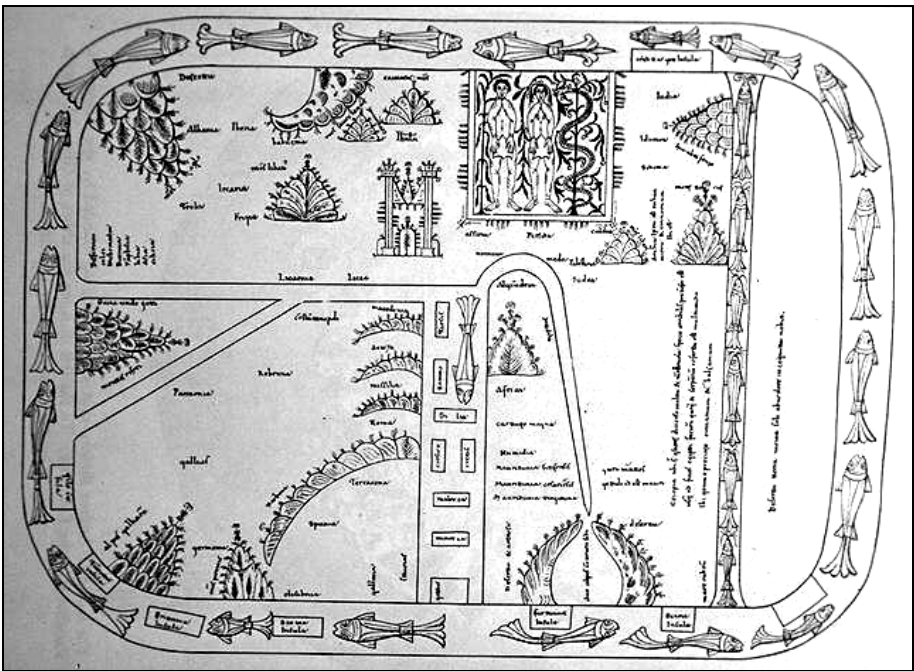

Figure 6. *Mappamundi* by Beatus (1109).

Although speculations on the Fourth Continent and antipodes inhabiting it have been associated with already Pliny and other late Roman geographical writers (Whitfield 1994: 16), it is the AD 1109 worldmap that has preserved as a copy

of the AD 776 prototype allowing us to date back the utopian discourse. This map, in fact, represents not the utopian, but rather an ideological(ly correct) discourse on apocalyptic visions as outlined in St. John's commentary on the Revelation; it was only in later times Beatus' device became to be used in sociocultural criticism of existing sociocultural establishments (e.g. T. More's *Utopia*). Beatus' map represents the Fourth Continent as located beyond the Red Sea and bearing the scripture of being unexplored because of great heat. Being unexplored, unknown and uninhabited is a common feature of the Fourth Continent in the quadripartite type of worldmaps. Thus, before coming to the above-mentioned connection between the antipodes and the Fourth Continent we could ask, why was it called into being first place. It seems that the most straightforward is R. Uhden's explanation who considers misinterpretation of the expression of *quattuor partes mundi*, which can also be understood as standing for the four rudimentary elements of the worldly phenomena as the main reason for the creation of the Fourth Continent (see Williams 1997: 17). At the same time D. Woodward refers, by the example of the German encyclopaedist Rabanus Maurus, to the confusion that arose from the literal interpretation of Holy Scripts and the obvious disconformity between the round shape of the Earth and the four corners of the world indicated in the Bible. Rabanus Maurus asked in the 9th century about how the round and the rectangle go together, and related the problem with the Euclidean rectangular circle. The solution of the medieval cartographers was representation of the circular Earth in a rectangle, and leaving spaces in the corners for iconographic images, e.g. for symbols for the four Evangelists (typologically this device survived for many following centuries). Another explanation was found by setting the rectangle in the circle so that the four cardinal directions and the circular Earth were set in correspondence (Woodward 1987: 319). In spite of suchlike possible rationalisations, it is not easy to believe in that the medieval scholars and religiously educated people would have created the Fourth Continent on the basis of, as one might say, unverified data (verification meaning of course checking the correspondence of the elements represented with the established worldview). Thus quite diverse reasons can be proposed for the creation of the Fourth Continent, later labelled as e.g. *Terra Australis, Terra Incognita, Terra Australis Incognita, Nondum Cognita, Java Major, Magellanica*. In terms of the actual landmass as a hypothetical base for later constructions, P. Whitfield refers to:

> "[...] Magellan's sighting of Tierra del Fuego, Marco Polo's accounts of lands south of China, and the classical Ptolemaic belief in a great southern land-mass counterbalancing those in the north" (Whitfield 1996: 57–58).

The Fourth Continent, being originally the smallest of all, reached enormous dimensions as it was used in maps for many centuries after Liébana's Beatus. We can name here N. Jaugeon's map from 1688, Van Den Keere's work from 1611, Hondius' worldmap from 1630, one by Giovanni Camocio's from 1567,

Pierre Descelier's map from 1550, the Catalan Worldmap from ca 1450, etc., etc. It can be, indeed, maintained that the Fourth Continent was used as a device for at least two purposes in worldmaps. These are contradictory, yet complementary aspects of creating elements of knowledge on the one hand, and concealing the lack of it on the other. Expectancy for new discoveries of regions, treasures and living beings was probably also an important factor that influenced both the creation of fictitious beasts and the growth of the Fourth Continent into an enormous Southern Continent that finally reached, especially in maps of the Dieppe school, 20 degrees south all over the planet (see Whitfield 1994: 64; cf. Nelson 1998: 20).

The above-mentioned topic of antipodes is connected with the first facet of knowledge management. The creation of antipodes on the basis of the actually met awkward nations has to do with the chain of collecting and transmission of (ethnographic) information that ended in maps and thus makes maps as sociocultural representations important for the analysis of the development of worldview. It is likely that the origin of antipodes lies in the actual tribes met by the Europeans: mechanical body modifications such as lip-pins, lip-plugs, pierced ears and stretched lobes, diminished feet and the similar, not to talk about tattoos, must have caused astonishment as 'natural features' of the faraway people(s). While seafarers and travellers as the first-hand informants of suchlike phenomenal individuals must have noticed the wooden and metal aids used to cause bodily mutations, it seems quite natural that mapmakers were finally reported of suchlike distinctive features as innate and biological (see also Braun 1998). Inasmuch as the information transfer cycle included the local people, actual voyagers, mapmakers, sponsors, printers, copiers and other institutions representing different levels of the same cultural space, there were individual interpretative inclinations, yet governed by shared cultural paradigm, that influenced the alternation of actual people and phenomena of 'other' lands and socii. This casts light on the antipodes created as a naturalised topic in the European worldview, while representations of them serve as specimens of unified concepts illustrative of the semiotic reality of the Western culture.

The new shocking outlook of human-like individuals did not give rise only to the such 'actually-non-human' races as amycturs (protruding upper or lower lips), but much more extreme cases like blemmydes (faces on the chest, neckless), cynophales, cyclops and many others, reaching the number of at least twenty in the relevant typologies (e.g. the *Nurenmberg Chronicle*). The weird outlook of certain African tribes was often accompanied by their black skin colour that, as it is well-known, was frequently interpreted as the cause of extremely hot sun. The excessively intense sunlight was to explain deformations also other than blackness of the African people — this rationalisation was used already by St. Isidore that has, by e.g. J. Williams, been dated back to Pliny's *Historia Naturalis* (see Williams 1997: 21). Indeed, as N. Lozovsky interprets the Isidorean tradition, "Africa has been so called because its name resembles the word *aprica* (open, exposed) and the whole region is exposed to the sun"

(Lozovsky 2000: 108). Great heat was also the reason for the use of *Terra Incognita* as a land unexplored — this can be inferred from inscriptions on the image of the Fourth Continent in several maps beginning from Beatus. The areas peripheral or outside of the oikumene were potentially dangerous, and therefore it is understandable why the firsthand data about them remained vague for centuries. Vagueness, in turn, gave cause for imagination that did not apply only to the African continent, but to other marginal areas as well; this matter will find treatment afterwards.

While the invention of the Fourth Continent was probably connected with actually met phenomena and peoples, there is, besides antipodes, yet another topic developed in the utopian discourse from the Medieval times onwards. Antipodes were a reason to create a different spatial unit, and their depiction was related to the actual occurrences in the real world, be them either African tribes or biological deviations witnessed as results of miscarriage or even births inside the European community. *Mappaemundi* demonstrate also such connections between the semiotic reality and understanding of the geographical environs by which units of the semiotic reality were simply projected to the geographical space. These cases are not due to mythological associations aroused by certain actual phenomena but, the other way round, come about as concretisations of mythological figures. One of the most well-known examples of the kind is the case of Prester John. This Christian Priest, appearing most familiarly in a map of East Africa in *Atlas Universal* by Diogo Homem (1558), is a medieval figure who was supposed to rule a vast Christian kingdom, and to possess huge fortunes, a big Christian army, and according to some sources, also elixir of eternal youth (see Nelson 1998: 20). In the medieval maps, Prester John was located in different places both in Middle Africa and Asia — this may have been caused by the pragmatic considerations of conquest, since Prester John's kingdom was searched in these regions with the excuse of joining his army in order to conquer the Moslem countries. In this line, D. Nelson describes the Portuguese Prince Henry de Avis, the Navigator, who belonged amongst those believing in the myth of that powerful Christian king and who thus urged explorations to African shores in order to unite his troops with Prester John's army and to fight against Moslems in the Mediterranean area after which the final goal — Jerusalem — was to be conquered (Nelson 1998: 20). Analogous inventions and semiotically constructed cultures can be found in the instances of Amazons placed into Russia, the Seven Golden Cities of Cíbola in North America, El (Hombre) Dorado in South America and the similar. Such fabrications that emerged after the Middle Age mapmakers had solved the problem of strange races and monsters by creating the Fourth Continent, are to do with further expectations of discoveries of new lands and fortunes. The constructed images of faraway Christian and non-Christian cultures were both reasons and explanations of campaigns — often with mutilating results not only for the sociocultural structure of the aborigines, but also for space itself (e.g. Antonio de Sepulveda searching for Eldorado and trying to drain Lake

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Guatavita in 1580) — in Africa, Asia, and later also in America. Mythological characters and objects helped to justify invasions, and, as suggested by Nelson, were deliberately created by explorers in their reports to sponsors in order to keep being financed (see Nelson 1998: 21). Thus explorers themselves probably consciously fabricated several of the marvellous phenomena.

Besides the pragmatic considerations of voyagers, deviation of information in the transmission chain ending with the mapmaker, an important cause for cartographic fiction was mapmakers' actual lack of knowledge that had to be hidden. Creation of cartographic fiction has to do both with spatial units and elements of nature and culture placed thereto. The invention of the Fourth Continent was originally to help explaining the actually faced beings, but later it turned into a source of imagination itself. Aside from the philosophical vindication of being a balance to other continents, the Fourth Continent, also called as the Southern Continent, had several functions one of which was complementary to being home for miracles. This role concerns the above-mentioned pragmatic technique of completing maps and extending the Southern Continent over vast unexplored land and water areas. On the other hand, it was not quite a matter of an option to leave the created land or water mass empty — thus again new creatures and phenomena were created with which to fill up the represented areas. Such a technique did not apply only for the Fourth Continent, but also for other barely or not at all explored quarters as well. We can find dragons, unicorns, sea monsters and other beings not yet found in nature in maps for many centuries beginning (at least) from the Middle Ages. The pragmatic aspect of such practice of compensating lack of knowledge by inventions was noticed long ago: John de Marigoli wrote already in 1334 that "[...] and then poets have invented ypotamuses and plenty of other monsters" (see Braun 1998: 34; George 1969: 21), in order to fill empty space in maps. Creation of new 'information' as a reaction to the lack of knowledge was noticed also by Jonathan Swift in his well-known and over-cited lines: "So geographers, in Afric maps,/ With savage pictures fill their gaps,/ And o'er uninhabitable downs/ Place elephants for want of towns" (Swift 1993: 171). As a device of veiling lack of knowledge, the Fourth Continent remained in maps for centuries; however, when referring to it as a device, it is possible to trace its connections with similar means. Here we can point at the beginning of extensive decorations used both in and around maps that became especially popular in the Renaissance (e.g. Van Den Keere's worldmap from 1611). Such decorations included depiction of the mapmaker's royal society, characteristic social pastimes and activities, illustrations of fashion, cityscapes, etc. Additionally we can witness guidance for interpretation of works by pointing out the philosophical framework of a given representation of the world: as mentioned, a common feature of maps largely after the Middle Ages was depiction of the four basic elements the world was believed to be composed of — suchlike representation of understanding the environs moved relatively fast to the framing of worldmaps. The frames included also portrayal of thinkers

considered to be most important for philosophy, cartography and other disciplines (e.g. the Hereford *mappa mundi* from ca 1300, worldmaps by M Waldzeemüller from 1507, J. Moxon from 1691, A. F. Zürner from 1710, H. Berghaus from 1852, etc.).

Discoveries and novel sociocultural units and/or functions inside 'traditional European' communities

Culture themes and discourses related to (human) species encountered never before could not avoid re-interpretation of the structure and essence of the European society and its members. Probably without a vast exaggeration we can maintain that the inclusion of exotic phenomena and races into the worldview brought along the rearrangement of the oikumenic elements as well, including entirely new approaches to the explanation of the role and status of the (functions of the) members of the societies belonging to the 'cultivated' areas.

If we turn to the Middle Ages, at least a triple segmentation can be traced both in the understanding of the structure of the 'own' socium and the world in general. Besides the mere lines of subordination that ordered society, the medieval social classes had dissimilar positions in relation to the religious core of culture — three main sections were clergy, warriors, and workers. Being originally connected with both the characteristics of the relevant social group and an individual belonging into it, according to J. Le Goff, the situation changed first in the 11th century when *conditio* replaced *ordo*, and secondly in the 13th century when *status* came into use (Le Goff 2001: 362). This seems to indicate different degrees of the 'cultural' already on the normal level of social organisation (later, e.g. in app. 1220 there appeared already classification of 28 social positions; see Le Goff 2001: 363). Le Goff hints to an English preacher: "God created the clergymen, warriors and workers; but devil created the bourgeoisie and the usurers" (Le Goff 2001: 362). Thus, on the other hand, we can witness multiple social segments also other than connected with certain sociocultural roles, indicating their relevant proximity to the religious core. Of course, it is hardly ever the case that social divisions would set individuals into social groups according to a single principle: the sociocultural normative centre can be located in several points of a semiotic reality. Social statuses, behavioural norms, individual sociocultural functions and the similar can be organised in the general framework delimited by the opposition 'sacred—profane' from various viewpoints. In the medieval context, for example, an inner segmentation of a socium defined the position of an individual on the 'sacred—profane' axis also according to physical and/or mental fitness in the category of 'normal human being'. This, however, did not mean that those mentally or/and physically subject to peripheral positions would also have been subject to a relevant sociocultural function: while the 'normal' were divided into several ranks by formal techniques, the unsound became, according to Le

Goff, to be evaluatively associated with either good or evil secrets (Le Goff 2001: 546). The evaluative dual classification of those falling outside the 'normal' developed into complex typologies in which frequent classes were the good advisers (village fools, fools of feudals and rulers), the unsound people needing cure or internment, and the possessed who were to be handed over to exorcists (Le Goff 2001: 546). The various Medieval categorisations of individuals indicate several possibilities of choosing the ground for both sociocultural segmentation and sub-segmentation. Inasmuch as the whole medieval culture was dominated and thus organised by religion, a more general sociocultural typology included three main groups: the normal who represented the core culture, the unsound who located in the periphery of the core culture, and the antipodes. These general groups could be put into relationship, since they shared the same world created by God. All individuals who were interpretable as human, or at least very close to the human species, had certain common features as beings given brought to life by their ancestors whose roots date back to the 'workshop' of God. In order to reach the 'real life' after death, all who had certain genetic connections with the humans, had to live according to the instructions delivered by God. The topic of the Fourth Continent and distant new races initiated vast discussion of the relations of the Europeans, and an overall summary of that discussion included ascribing the Europeans the task of evangelisation of all races. In that sense these topics settled down, and the structure of the (world) community was brought to balance by outlining the function of races and individuals in that structure. However, both in connection with the development of scientific and technological advances in the Western civilisation, and the existential topics due to findings in early explorations, entirely novel problems started to emerge from the inside of the oikumenic community itself. Namely, as attention to physically odd individuals inside the European societies grew, discourse on the semiotic status of those physically different from the average gained scope and weight, because it was related to the segmentation of the core of the oikumenic sociocultural space. It is probable that discourse on monstrous births, so as separated from utopian narratives, was also connected with the improving practice of medical recordings. Whereas physically mutated humans were eliminated at their infancy practically all through antiquity in their infantile stage, situation changed as the welfare of the Western society grew. Humans with weird or even shocking biological outlook born inside the European socium called for attention the more they became kept alive and introduced to wider public and reflection. Under the guidance of the religious code-text, biological anomalies got interpreted as messages of — mostly — the wrath of God. One of the most well-known specimens of the divine request for attention is the so-called Ravenna Monster (see fig. 7) of

whom Ambroise Paré, in his *On Monsters and Marvels* (1573), mentions at the end of the chapter *Examples of the Wrath of God*:

> "Another proof. Just a little while after Pope Julius II sustained so many misfortunes in Italy and undertook the war against King Louis XII (1512), which was followed by a bloody battle fought near Ravenna, there was born in the same city a monster with a horn on its head, two wings and one foot like that of a bird of prey, an eye at the knee cap, and participating in the nature of male and female" (cited from Fiedler 1978: 25).
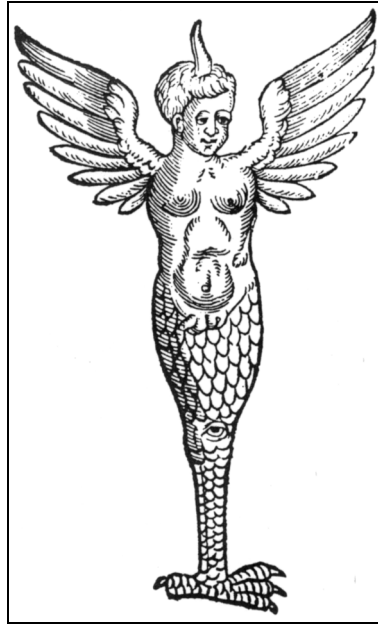

Figure 7. Ravenna Monster.

L.A. Fiedler refers to P. Boaistuau's (1519) interpretation of that biological sign for mankind:

> "Not content to leave this creature 'so brutal and farre differing from humaine kinde' as a general symbol of the wrath of God, Boaistuau explains the horn as signifying pride and ambition, the wings lightness and inconsistency, the lack of arms want of good works, the eye in the knee too much love of worldly things, the 'ramping foot' usury and covetousness, and the double sex 'the sinnes of the *Sodomites*.' The added ypsilon and the cross, he makes clear, are signs of salvation, indications of a way out of the calamity portended by so monstrous a birth" (Fiedler 1978: 25).

Discourse on existing and invented anomalous individuals is connected with a most interesting semiotic phenomenon. As mentioned above, first encounters

with races other than European brought along the Fourth Continent as a semiotic construction, and topics of discussion centred at the status of weird beings mostly in their ontological existence. In certain nuances, antipodes and ordinary humans were alike; for example, they were all biological beings who had to solve survival problems, they formed social groups, created artefacts, had to face puzzles connected with the end of their biological functioning, etc. Antipodes were different from normal peoples in the manner the fauna of distant lands was dissimilar from the European. It was not abnormal that in alternative geographical settings there existed bizarre species. Monsters and prodigies inside the oikumene, however, were treated teleologically in other terms: they were messages from God. In a significant and curious manner, comments on 'the medium as the message' obtain both semiotically and historically entirely new perspective in the light of this discourse. The primary importance was not their biological functioning, but their semiotic status and meaning as texts. Their success and achievements could not be measured in wealth or age, neither did it hinge on themselves. The fact that their accomplishment of the purpose of their existence depended on the success of humans in interpretation and actual consideration of the message the so-called monsters bore, may explain why Eurocentric communication can often be seen as unilateral in the sense of turning the semiotic status of communication partners into that of an object or medium.

Besides the semiotic status and role of odd biological beings, there existed the quest of their biological relation to man and fauna. The new races met in Africa and Asia shared a common denominator with antipodes: although belonging into the 'non-cultural' sphere, both could be oikumenically semiotised. Difficulties arose from the inside of the oikumene: how to explain anomalies in the European community, especially as related with certain similarities with some antipodean races? Was there a possibility of a tiniest genetic connection between the 'humans proper', the monstrous marvels and the antipodes? One of the simplest of possible abnormalities open for everyone's eye was, of course, the height of a person. Myths of the dwarfs and the giants that formed a certain basis for extensive discourse on mutated races got support from certain existing specimens: the dwarfs primarily from existing races like the Pygmies, and the giants mostly from individual cases (on an overview of European discourse of biological mutations and their mythological interpretations see Fiedler 1978). The Pygmies as an actual race of small height helped to hold onto the combination of science and mythology at the explanation of the racial contents and connections of the world. While we can probably talk about certain continuity of the utopian discourse so as differentiating between the cultural and the non-cultural, there seem to be quite significant ideological dissimilarities between the beginning of distinguishing between the oikumenic during the Middle Ages and interpretation of the 'own' cultural space during the Renaissance. The cultural explosion caused in the Middle Ages by incongruousness between the established holistic Christian

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understanding of the world and the surprises met along with possibilities of longer travels implied the question of locating the weird races as related to the *Corpus Domini*. The oikumenic worldview entailed synchronic understanding of the linguistic, national, geographical and the similar which must have resulted in synchronic understanding of the social and the cultural (as organised by the religious code).

The dilemma between the discovered races being related to the non-human (that raised questions also in connection with the occasional biological abnormalities in Europe) and them being human (that helped to justify the need of forceful evangelisation) was obviously gradually inclining towards inclusion of them in the humanity, however — as a category needing developmental guidance. The situation brought along another topic to be explained — exactly how are related the humans, the human-like and the animals in biological terms? This question seems to have found its acute start in late Medieval thought, and found amplified attention especially during the Renaissance under concerns about the sociocultural heritage in general. At trials of reconstructing the course of discussion on the nature of humanity and the position of the European socium we meet not only problems concerning the dominants structuring *Weltanschauung*. As mentioned above, the cartographic artefacts available for contemporary investigation are results of vast social cooperation and long information chain that entailed data deviation at several levels. However, in addition to cultural intentions of interpretation, one has to take into account also the economic reasons that gave way for frequent injections of false data into the European understanding of the world. Both mystification and demystification of weird races was probably connected with the Renaissance collection boom: for example, if talking about the dwarfs as one of the starting levels for European discourse on the so-to-speak intracultural freaks, it is not only the Pygmies themselves we can talk about, but also of falsification (not only fabrication as e.g. in the case of deforming the body by gadgets hampering growth) of specimens of weird races. The collectors' wish for a personal *Kunstkammer* exceeded royal palaces, and, according to Fielder, after the rich collectors from the West did no longer subsidise the actual shrinking and distortion of children, merchants from China and the Indies continued to counterfeit corpses of dwarfs: drying small monkeys which had first been de-tailed and shaven of all hair except that on their skulls and chins (Fielder 1978: 50). The topic of the freaks as linked with the apes on the one hand, and the Pygmies on the other, is directly connected with the overall question of the relationship between God, man, animals and the man-like phenomena. The preference of linking weird looking races with the animal kingdom rather than

with mankind, is well illustrated by the association of the Pygmies with apes —
according to Fielder:

> "[…] early legends in fact assign them a common origin, one claiming that
> both were made of the clay left over when God had finished molding woman
> around Adam's rib" (Fiedler 1978: 72).

The boom of collecting weird biological phenomena that characterised the
Renaissance was of course in connection with the beginning of the collecting
and museum culture in general, whereas its intellectual roots date back to the
Middle Ages and are probably connected with the search for the so-called
Missing Link. The Missing Link was often approached through the term of
Homo ferus, referring to the species in-between the apes and the humans; the
debate going on until at least 1976 with arguments about the 46 chromosomes
of humans and 48 of apes (see Fiedler 1978: 155). The 'missing link' seems to
be a conception used until now in legends about the bigfoot and the similar, not
to talk about children found in the wilderness who have been associated with
having been nurtured by wolves — a cultural outcome of the 'missing link' can
be found in artefacts such as Tarzan during times proceeding. The idea of the
'missing link' was probably also what caused calling human prodigies by names
pinpointing their peculiarities by associations with animals (e.g. 'the Elephant
Man', the 'Caterpillar Man', the 'Alligator Boy', the 'Snake Boy', the 'Mule
Woman', etc.). In this sense the 'missing link' signified a new era in the
comprehension of human anomalies: what had previously been taken as divine
warnings, became scientifically rendered as phenomena of worldly origin. We
can outline at least four general types of explanations of the existence of the
human-like beings: divine origin, natural causes, abuse of natural laws, and
cultural techniques. The divine causes were mostly associated with godly
warning, natural causes mainly with unequal division or impurity of semen (see
e.g. Fiedler 1978: 234), misuse of nature meant primarily bestiality (see e.g.
Fudge 2000), while cultural techniques chiefly concerned witchcraft. A. Paré
outlined causes of bodily mutations, combining opinions from Ancient Greek
scholars with his contemporaries, and reached the number of thirteen. Besides
God's glory or wrath, too small or too big quantity of semen, rotting or
corruption of the semen, mixture of seed, mother's wrong bodily behaviour
during pregnancy, hereditary illnesses, narrowness of the womb and the similar,
Paré names also (maternal) imagination, demons and devils, and "the artifice of
wandering beggars" (see Fielder 1978: 233–234). In general, subdivisions of
monstrosity split into the divine and the earthly, in other words — into the
unpredictable and the predictable. The treatment of predictability and
unpredictability in sociocultural discussions, in turn, reveals reflection on the
regularities in a given semiotic reality, and is connected with the dynamism
between the central and the peripheral in the oikumene. When inspecting
relations between the 'natural' and the 'unnatural' that influence attitude to any
semiotised structure, as also it occurs in the discourse on the status of

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monstrosities, we can confront quite controversial regularities of the process of interpretation and naturalisation of the malformed. Naturalisation concerns all kinds of unusual phenomena, but as a process of rationalisation, it follows different logical strategies in different cases of the abnormal. In fact, it is already the very term 'abnormal' that refers to a specific category of the monstrous: M.-H. Huet, following G. Canguilhem, mentions that:

> "[…] 'anomaly' denotes a fact — it is a descriptive term — while "abnormal" implies a reference to a standard of value; it is an evaluative, normative term" (Huet 1983: 75).

The 'monstrous' can, one way or another, always be explained, rationalised: they are results of deviated combinations of existing norms and laws. The 'anomalous' (deriving from the Greek *an-omalos*) results from breaking the normal regularities, but is not unexplainable, and thus belongs still into cultural discourse. An anomaly is rationalisable, and is thus not (completely) abnormal. As it has been put by Canguilhem:

> "When monstrosity becomes a biological concept, when monstrosities are divided into classes according to consistent criteria, when we presume to imagine that we can provoke them experimentally, then the monster is naturalised. The irregular submits to the rule, the prodigy to the predictable" (cited from Huet 1983: 75).

Still, since monsters may be results of maternal imagination or desire, which means that the creation of prodigies could also be connected with mixing up the physical and the semiotic reality, we again find interpretation of both monsters themselves, their origin and purpose balancing between the concrete and abstract reference (see Huet's example of Heliodorus of Emesa's description of an Ethiopian queen who gave birth to a while child, having been looking at the pale picture of Andromeda during her pregnancy; Huet 1983), not to talk about the fusion of boundaries between objects and their representations.

Such divisions of explanations of monstrosities are remarkable for their semiotic value at the description of sociocultural continuums: rationalisation of the peripheral and borderline phenomena outlines the structure of a social organisation, its semiotic reality of a socium, just as well as regulations for using sign systems for articulating *Weltanschauung*.

Units in **Corpus Domini** *and relations between them: Some application of the semiotic square*

Through the sign systems of the semiotic reality, maps are representations of geographic reality. Thus maps can be treated as projections of semiotic constructs to spatial units — this turns them into spatial cultural models. Cultures as semiotic systems have frequently been characterised by spatial

features both in physical and conceptual terms. A concurring idea of relating cultures with spatial structures has been description of (a culture's) space together with phenomena it encompasses as organised; such models imply that culture and space are ordered in a unified manner and therefore, when talking about phenomena outside a given spatial or cultural organisation we would, as if, be talking about non-semiotic occurrences. Here we can bring examples from cultural semiotics, especially in the face of the term 'semiosphere' as presented in J. Lotman's works (e.g. Lotman 1984). However, as demonstrated above, the situation is much more complicated, and often it may be utterly inappropriate to equalise the relation 'cultural—non-cultural' with the 'organised—unorganised'. As we saw by the example of worldmaps, the oikumenic principle was concentric, but not exclusive, since it was the oikumene itself that had to finally be located in its meaningful position in the wider *Corpus Domini*. The latter, in turn, had no alternative but to be meaningful, or at least purposeful to be teleologically semiotised, since otherwise God's creation would have been set to doubt. It is possible to describe the medieval sociocultural segmentation of the environs in terms of opposition between the 'cultural' and the 'natural'. Replacing the 'natural' with the 'non-cultural' has sometimes solved difficulties emerging at the actual use of this opposition. However, since the latter sometimes transformed into the category of e.g. 'another culture', the 'cultural' and the 'natural' seem to be more efficiently describable in (not in a transitive) combination with the pair 'organised—unorganised'. Therefore it seems logically grounded to apply the semiotic square to the analysis of both maps themselves, and the worldview and sociocultural structure they represent. In the light of the semiotic square, Lotman's above-cited opinion about the insubordination of cultures structured by opposition to internal differentiation, seems simplified. The semiotic square is applicable to individual representations of the world, and the items of the four categories may vary among different maps. The direct aim of the current work is not analysis of a single concrete cartographic work; thus the four categories can be illustrated generally on the basis of several specimens in the history of mapping. It seems that in a curious manner the categories of the semiotic sphere coincide with the above-described possibility of distinguishing between sociocultural facts as related to either ontologically objective, ontologically subjective, epistemically objective, or epistemically subjective realities.

Representation of nature (landscape forms, fauna, flora) can be stated as the primary goal of cartographic mapping both historically and in terms of modelling the environment. It seems natural that before loading the physical reality with cultural meanings and describing Earth oikumenically, it first had to be delimited as *gea* and semiotised orientationally. Nowadays the category of the 'natural' in maps may chiefly be connected with the so-called physical geography. Elements of nature were represented in maps and used also for framing a cartographic work (e.g. city views, regional maps, and also worldmaps). The framing function of 'nature' points at a more fundamental role

of it: representation of natural phenomena involves reflection on culture as well, since via the demarcation of natural elements also the identification of culture is executed. Thus nature as a semiotic category functions, in R. Jakobson's terms, as a metalinguistic unit, and refers to the regulations that organise semiotic systems by drawing together certain objects of reference. The analysis of geographic representations indicates that 'nature' often obtains a favoured position in the mapping of the non-oikumenic (that frequently equalise with the *alien*) areas depicted by forests or fauna (e.g. maps including Northern Europe). Thus at the description of 'alien' areas as 'non-oikumenic regions', nature turned into an evaluative category resulting both from the semiotisation of non-oikumenic area and the simple lack of knowledge. The further away the area mapped was from the mapmaker's homeland, the further it was from 'culture', and this relation was reflected in the increase of the depiction of 'nature' in maps representing 'extra-European' areas.

Maps from the Middle Ages to early Renaissance can be divided into maps of close surroundings or regional maps, road maps, sea maps, worldmaps. There exists a considerable logical and semiotic difference in the functional range between the *mappaemundi* and maps of limited use or purpose: while the former had become into religious and didactic means, other maps had to meet certain practical needs. Thus e.g. the sea maps were mostly dedicated to the representation of nature as a physical reality as accurately as possible. Significantly the sea maps, or the *periploi*, although not being maps in their formal plane, influenced also the structure of the Renaissance worldmaps. P. Whitfield (1996: 7) points out that the *periplus* or the pilot book was the first known written aid (the third century) for navigation in which there had been put down the harbours of different regions together with the courses that were expressed by wind directions and the amount of days for travel between those ports. At the end of the 13th century the sea maps became known as the portolanos in which their nature was disclosed as lists of harbours along with distances between them. Thus these verbal maps were meant for orientation in the physical space, and the latter was described through cultural phenomena (ports, towns). Approximately between 1300 and 1500 the sea maps developed, probably complementarily, both in their form and in their contents: the sea maps started to transmit also mainland areas, and this was possibly due to that the verbal pilot book attained the visual iconic discourse (landmarks — cityscapes, contours of individual buildings — became represented by pictographic units). In addition to the basement of the sea maps on actual observation, the development of these maps towards definite relationships with the physical reality was favoured by the re-discovery of Ptolemy's merits to geography (Ptolemy's first Latin translation was published in Florence in 1406, the most well-known reconstruction of the map in 1482 in Ulm). Ptolemy's contribution to the systematic description of the world presented opportunities for organised representation that strived towards objectivity by the system of geographic co-ordinates, gridlines, projection, and mathematic computation. One of the most

influential schools in developing the sea maps into worldmaps was the Catalan one that involved the representation of mainland details. P. Whitfield has commented on the Catalan mapmakers who started to depict rivers, mountains and cities as Paris, Florence and Toledo that had no connection with the sea by stressing that in their maps lands were marked by religious saints, flags of kingdoms and nations. Thus descriptive texts appeared in maps alongside with deserts decorated with camels, and seas with ships respectively (Whitfield 1996: 22).

Thus we can speculate that contemporary cartography is based on the beginning of empirical outline of European coastlines, the re-discovery of the Ptolemaic principles of cartography, and the unification of mapping the sea and mainland masses. While through the reconstruction and visualisation of Ptolemy's map an organised representation of the world became possible, then orientation in the world was so-to-speak nature-based according to the system of winds introduced by Aristotle (*Meterologia*). Before the beginning of the use of the compass at the end of the 12th or the beginning of the 13th century, the determination of positions at sailing depended on the sailors' ability to recognise the direction and nature of winds (Whitfield 1996: 7). The eight to twelve winds were also loaded with cultural conceptions — for example Timosthenes of Rhoses associated winds with the countries they blow from, not to talk about the personification of winds in frames of maps and in the wind rose (ibid.).

Animals were used in maps widely until the beginning or middle of the 17th century. As mentioned above, lands could be 'furnished' with actual and/or fictitious beasts in order to compensate the lack of geographic knowledge, just as well as maps representing new areas were to function as introductory characterisations. Therefore it is not surprising that while the European territory was mostly filled with pictographs of cities, it was the fauna what was considered of informative value for the description of new and strange lands. According to a characteristic notice by W. George, in the maps of the nearctic territories, one can meet three fourths of the total amount of the most spread animals (George 1969: 100).

Elements of nature, primarily those of the fauna, started to fade away from the maps by the Europeans at the end of the 16th century. As indicated by George, animals appear in the 17th century maps rarely, and if doing it at all, then as illustrations in the cartouches (George 1969: 82). G.R. Crone associates the transfer to modern mapping with G. Delisle, a mapmaker of the beginning of the 17th century, whose maps:

> "[…] are not outstanding in their execution, but they are free of the mythical monsters and other devices with which the older cartographers had disguised their ignorance — or attracted their customers" (Crone 1968: 123).

In the Renaissance maps, nature was already used as a purely illustrative element and a background (especially in the genre of city-views), thus such a 'nature' ought to be approached as already 'cultivated'.

Culture and cultural items in maps can be divided into two main groups: the cultural as signifying those parts of the geographic realm that have been influenced or created by man (fields, roads, settlements), and the cultural as a general marker and organising category of the worldview. At the representation of both the 'own' culture area in e.g. the regional maps, and at the depiction of the whole known world, symbols of the cultural history prevail. Thus we can mostly encounter iconic signs that convey the distinctive features of religious and government centres, just as well as pictographs like coats of arms and city arms. A pragmatic reason for that might have been indication of tracks to travellers (e.g. road maps and pilgrimage maps). The Medieval worldmaps have been associated with three main traditions in mapping: the scientific, the empirical, and the encyclopaedic (see e.g. Whitfield 1994: 40). The elements of worldview that these traditions convey can, as proposed by D. Woodward, be grouped into three: (a) the historical and geographic facts, (b) miracles, legends and traditions, and (c) the symbolic content (Woodward 1987: 326). However, it seems that it would semiotically be more useful and correct to differentiate between (a) the fictitious and (b) the historical and geographical data, or the abstract and concrete referents the former of which belong to the sphere of tertiary modelling systems that are based on the primary modelling. Of course, on the level of expression the two domains are intermingled. Often it is possible to surmise the concrete basement of abstract reference in maps (e.g. the antipodes, weird beasts, etc.), and so what at first sight could be labelled as fictitious or culture-genetic referents, are actually traceable back to real phenomena interpreted from the point of the Eurocentric worldview.

It is, of course, possible to bring examples for the opposite process of the semiotisation, sometimes even the creation of the geographic reality on the basis of the semiotic one. In such cases we can often meet the geographic and the semiotic reality intermingled — in addition to the placement of mythical and religious *topoi* into representations of the Earth, for example the rivers of Paradise form the beginning for the rivers of Tigris, Euphrates, Ganges and Indus or Nile (see fig. 8). The current example includes also representations of the physical reality, such as e.g. Jerusalem as the centre of the oikumene.

Figure 8. Excerpt from *Psalter Map* (ca 1250).

It seems characteristic that while already the Medieval cartographers were aware of a certain incongruity between their maps and the geographic reality, the fusion between the semiotic and the physical realms occasionally generated informative and semiotic jams. D. Woodward, for example, following Morison, describes problems that emerged at the determination of the exact location of the rivers of Paradise at the third voyage of Columbus in 1498: Columbus, having heard one his men on *Correo* who had seen four rivers at the beginning of the Gulf of Paros, announced that those were the very rivers of Paradise (Woodward 1987: 328).

The 'non-natural' elements, just as well as the 'non-cultural' ones, are obviously more hypothetic, and therefore they also are often mutually intertwined. The 'non-natural' is an evaluative and creative category that depends largely on the mapmakers' conceptions of culture, thus it provides us with beneficial information about both the physical and the semiotic reality of an era of a cartographic product. From the semiotic viewpoint it seems that information about the 'cultural' through the opposite or contradictory categories is of value, and 'non-nature' is exactly what contains elements for the signification of the non-oikumenic sphere that, although being 'uncivilised', has nevertheless been semiotised from a viewpoint inside the describing culture.. Thus we can meet here again a so-called garbage-can case in which a system is defined via its outside. Sometimes such descriptions apply the minus-device by which an idea or conception is evoked by the marked disuse of that sign-vehicle that habitually connects to the relevant concept. Therefore the leaving of faraway areas blank in representations could encompass reference to phenomena not yet interpreted, just as well as could the filling of the unknown areas with beasts be associated with the lack of knowledge in the same way as Liébana Beatus marked the unexplored status of the Fourth Continent verbally in his map in AD 1109. At the same time, the beasts not to be found in nature, e.g. sea monsters, could serve as signs of waters dangerous for sailing. Thus the monsters as symbols took over the pragmatic indexical functions and became into hypoicons in the Peircean terms, and so the fictitious origin of several beasts cannot be associated with mental experiments. On the other hand, for consumers of maps in Europe, monstrous beasts probably were not related to purely significative purposes or the abstract referents, and in the receptive discourse, concrete objects in faraway places were induced through the sign-vehicles that were actually based on conceptual figures. In other words, instead of stimuli-based semiosis, an interpretant gave rise to a certain representamen and an object was conceptually constructed on the basis of the two purely semiotic units of the sign. So, whereas the representational discourse of mapmakers on marvels in the world was often based on mis-interpreted factual phenomena (a concrete referent → culturally loaded abstract referent → pseudo-concrete referent), during the reception, the created constructs were legitimised as concrete, though marvellous objects. Just as well as the sea monsters several beasts depicted in maps could have served as myhtologically loaded iconic indexes. For example, the emergence of one of the 'standard' wonder-beasts, the unicorn, is probably explained by the report of Friar Marco de Niça from 1539 (viewed, in turn, by R. Hakluyt in 1598):

> "Here they showed me an hide halfe as bigge againe as the hide of a great oxe, and told me that it was the skin of a beast which had but one horne upon his forehead, and that this horne bendeth toward his breast, and that out of the same goeth a point right forward, wherein he hath so great strength, that it will break anything how strong so ever it be, if he runne against it, and that there are great store of these beasts in that country. The colour of the hide is

of the colour of a great goat-skin, and the haire is a finger thicke" (cited from George 1969: 100).

George infers that such a description refers to a wild goat, and her opinion seems to be supported by Pierre Descelier's 'bearded unicorns' (see George 1969: 101). In addition to purely fictitious beasts and those created on the basis of mis-interpreted animals, invented fauna came to being by the combination of little knowledge of the phenomena represented and the misplacement of the latter into wrong climate zones (see George 1969, esp. in connection with the Australian region, George 1969: 172ff). The non-natural units (that sometimes had factual roots) in maps also encompass a feature that seems of great importance even for the understanding of relationships between the different human races. Above we mentioned certain metalinguistic tendencies in the 'Era of the Lone Geographer' that were connected with differentiation between the civilised and primitive peoples, amongst other characteristics, also by the ability of feeling emotions. As pointed out by E. Braun, Plutarch reported in the second century of elephants having human characteristics and the ability of (inter-species) affection (see Braun 1998: 33–34). This understanding entails an ambivalent situation in the attitude to the novel races, and there seems to be little surprising in that there also took place an opposite transfer of features of character. It even appears that extrapolation of what were expected to be characteristics of animal behaviour to strange peoples prevailed and led to certain long-term dispositions in scientific description, just as well as the overall attitude to the non-European races (cf. the above discussion on the metalinguistic devices in anthropology). Thus is not difficult to see why the non-natural category, being simultaneously rather floating and separated from both culture and nature, aided to discourse upon the relations between the latter two, and led to several culture themes that treated intermediate (semiotic) phenomena. The intermediate phenomena encompass monstrous races that were often hideous not only because of their physical, but also psychological features (one can obviously detect here the practice of displacement); the whole discourse about the Missing Link, monstrous births inside the European community and their (semiotic) status, etc. It is not possible to underestimate the importance and influence of the category of the non-natural for the development of the Eurocentric worldview and attitudes toward the 'peripheral' socii. Relationships between culture and nature became clearer in the course of the development of the classification of animals and plants, and it was hardly before the end of the Renaissance that the 'non-natural' started to disappear from the minds and representations of Europeans. The systematisation of nature was supported by the rise in expeditions to faraway lands and, maybe even more importantly for the European worldview, by catching and killing novel beasts, bringing them back to Europe and creation of the first (scientific) zoos (only in the beginning of the 19th century). The realistic-scientific worldview, or rather — a new understanding of it — that is labelled by systematic classification and

the name of C. von Linné, entailed also changes in the cartographic representation of the world and the structure of maps. Weird beasts and phenomena were depicted more continually and on systematic basis, and provided with longer descriptions instead of short stamps (e.g. H. Abraham Châtelain's work *Carte des Pays et des Peuples de Bonne Esperance* from AD 1719 in which "zembras, ceraste, rhinoceros, vache marine, chamelleon, cerf, grand lezard, petit lezard" were detailed; see Braun 1998: 35). In spite of the development of systematic metalanguage, explorers and missionaries like J. Bruce, M. Park, D. Livingstone, and H. Stanley still delivered stories about the unique affinity between the African people and animals (Braun 1998: 36). Nevertheless, beginning from the early 18th century, we can detect the reduction of the non-natural from the 'scientific discourse', including cartographic production, and the separation of the representation of the physical and the semiotic reality. This partition goes in line with a growing distinction between the scientific and the artistic and, in an extremely interesting manner, combines the category of the non-natural with the non-cultural into the new genre of utopia based on the presentation of alternative phenomena and beings as located in alternative sociocultural compounds in alternative spaces. Inasmuch as scientific and artistic biases of the representation of the existing surroundings principally treat(ed) one and the same world from different angles, *science fiction* is bound to other realities.

'Non-culture' is, in actual analysis, often the most hardly explicable category. In maps, it ought to be related to the depiction of 'strange' lands, but frequently there have been preferred elements of 'nature' (e.g. vast forests in the 'scientific maps' to compensate lack of knowledge) or 'non-culture' (ideologically shaped inventive approaches interpreting facts freely). Nevertheless, in association with the hypothesis of the positive correlation between the category of the non-cultural and the epistemically subjective facts, we can probably detect two groups of units that belong here. The first one incorporates that portion of the outside of the oikumene that was opposed to 'culture' already in the times of Ancient Greece by the term referring to barbaric; as already mentioned above, the latter distinctive feature can be defined on at least linguistic and territorial grounds. The second group of 'non-cultural' elements is also related to the outside of the oikumene, although in another sense: these units lack of reference in the physical reality and, as constructs that have roots in the semiotic reality, they can function only through the modelling systems of the latter. In other words, the second group lies outside the 'cultural', since the semiotic devices of a culture itself have created it, whereas it represents a singular or multiple alternative dominants for the interpretation of either the existing or fictitious semiotic realities. Both groups of 'non-culture' — the 'barbaric' and the 'utopian' — just as well as their possible subdivisions are created, in one way or another, from the position of the describing culture itself. This means also that in the face of fictitious structural elements in maps we

additionally meet their function of activating the utopian discourse as *science fiction*.

The imaginative power embedded in culture-genetic elements not to be found in the realm of concrete reference binds together the scientific and the artistic discourse, and thereby triggers the utopian one by the invention of new realities in which alternative spatial and physical reality accommodate alternative cultures and societies. The origin of such logic can be traced down to those scientific descriptions of the world, which invented, used and enlarged the Fourth Continent. That new land mass probably enabled T. More to develop his sociocultural criticism as an offer to organise life in the same manner as in the strange island of Utopia. The fact that Utopia was described as inaccessible without proper cartographic aid and ship as a special means to reach it placed it outside the oikumene (cf. L. Marin's 'blank spot'; Marin 2001: 94). This is extremely significant, since objects and phenomena to be found in Utopia were not associated with the periphery of the oikumene i.e., with the 'non-cultural' or the 'non-natural', but were centred *elsewhere*, shaking thereby off all possibilities of being falsified from the position centred in the oikumenic paradigm. These characteristics appear to be the universals that make science fiction possible also today and that continue their essential semiotic existence in contemporary genres from literature to ufology or cartoons. It seems that the existential necessity of such discourses not to be falsified, is strengthened also by other semiotic devices such as the (pseudo)scientific language of description (e.g. terms of physics and chemistry for the explanation of the working principles of gates between worlds in animations for the children). The overall developmental logic leading to the creation of new worlds can be found to be in connection with the evolution of cartography and the description of the ontologically objective facts in the physical reality. Inasmuch as this seems to coincide with the Peircean understanding of the development of human semiosic abilities, it is worthwhile to examine the evolution of mapping on the level of the very signs.

The description of the environment together with its geographic and cultural contents i.e., the description of worldview, so as combined with the two differentiated discourse of cartography and chorography, has had an immense influence for cultural memory. Remembering and explaining culture in spatial terms can be analysed through thick description in anthropological terms, and thereby a crucial aspect for ascribing a certain bias of intentionality for fact construction has to do with, as mentioned above, the relation between scientific and artistic discourses. Ascription of either the former or the latter feature to a representation of the world must take into account era-specific and context-sensitive cultural surrounding of a given work. We witnessed possibilities of culturological reconstruction of such contexts of maps. However, there can be outlined certain tendencies governing the interpretation of cartographic production in connection with the semiosic logic built in the structure of maps as well. As will hopefully be shown, the semiosic evolution of world

description is in connection with the Peircean ideas about the growth of conventionality from 'Firstness' to 'Thirdness', thus also with the ontological and epistemic dimension of the facts in the world beginning from the creation of the *Umwelt* to the purely semiotic reality.

Mapping the world: From the textual level to the level of signs

As mentioned above, the description of the semiotic structure of culturo-historical maps in terms of signs, must solve certain dilemmas of signification that are due to the polarity between indexes and symbols. From the standpoint of cartography the indexic relations of representation may be considered as the foremost means of any mapping and as markers of cartographic accuracy. A vivid example here is old marine cartography where, for navigational purposes, the coastline was depicted by the most visible littoral buildings and cityscapes (rarely by comparatively less persistent natural objects); so that the cultural objects in maps could indicate the conditions of nature to a mariner (see also Ehrensvärd et al. 1997: 108–109). The index as a sign can, in turn, be divided into at least two: (a) index as a semantic unit, and (b) index as a pragmatic unit. In the first case we are dealing with a 'plenipotent sign' where index has been switched into the sign situation i.e., where the index is semiosically strongly relevant. Such an index is a unit that sets the message up itself; if the latter is semantised, then the relevant index must have been switched into semiosis (e.g. a classic example 'smoke → fire'). At the same time index as (merely) a pragmatic unit is just an 'assistant-sign' that simply has a directive function with respect to semiosis. In other words, in the case of a sign of this type, semiosis is dependent on two main aspects — one of them concerning the message, and the other one concerning the situation of communication. Of course, it is often not possible to rigidly differentiate between the two, but just to outline them as distinct and complementary aspects; nevertheless the type of index associated with them can conclusively be illustratively by the so-called the 'title-effect' (see e.g. Tannenbaum 1966: 483), or *anchorage* (Barthes 1964: 40) (see fig. 9c). In this way such an index is always a part of a message and its inclusion into semiosis depends on the actual situation of communication: whether or not it will be recognised at all, whether it will be rendered important or not, or whether it has any importance for the process of message decoding at all. Additionally, indexes of this type lead to complex semiosic situations in which the iconic, indexic and symbolic clues intermingle (see fig. 9a, 9b, 9c).

Figure 9a; 9b; 9c. Excerpt from the upper left corner of the *Map of Estonian Literary History* (1978) by O. Soans. An element from the right-hand side of the same map. J.N. Bellin's map of the Baltics and Danzig (1789).

This is a wind rose adapted for the literary context and is to provide a co-coordinative frame for a so-to-speak literary-spatial orientation, being therefore an 'appropriately' re-semantised unit of cartographic signification. This is the spot where the wind rose with the cardinal points is usually located (see also the *Map of Estonian Cultural History* by O. Soans). Therefore, as we are dealing with a similar manner of mapping, we could equalise the discursive logic, too. Still, on the other hand — as the whole map has been composed, using eminent personalities and outstanding cultural phenomena, we can infer that an emblem of distinction is involved. This is indicated by the labels of five literary societies and literary trademarks; in this connection it is remarkable here that the picto-gram pointing to the West is not indexic — at least a matching one has been situated to the East, on Lake Peipsi (see fig. 9b). A similar ideologisation of devices definable as belonging to the field of sciences can be found in French maps in which, after the French Revolution, there emerged a custom of replacing the cartographically traditional north-indicating top of the wind rose — the lily — with a red cap (see Ehrensvärd et al. 1997: 146; see fig. 9c). This is definitely a worthy example of the intrusion of units pertaining to cultural and ideological signification systems, into the semiotic system of an exact science, the latter being in fact an 'objective' basis for physical and conceptual orientation in the world that, according to such logic, should precede ideological discourse. The case of the red cap in the French cartographic tradition also connects to the topic of the so-called signifying orders and culture themes that interconnect different creative cultural genres, just as well as to the logic of the 'life of signs' as outlined by Ruesch (1972: 282–284).

The development of cartographic praxis and the evolution of semiosis

Inasmuch as the process of elaborating conventional cartographic signs is a long-term process, and in its nature an utmostly ideological and conceptual one, it is natural that the first signs to be used were the pictographic ones which, in the semiotic terms, had the origin and function of an index, and were to work through the iconic principle. Frequently, the issue was about depicting the visual trajectory of specific itineraries, e.g. of pilgrimages, marine routes, etc., whereby the signs used were closely tied with the actual context both environmentally and also thematically, so — essentially different sequences of objects were chosen for maps of specific purposes. Thus, due to (a) the original function of the map, and (b) the lack or insufficiency of conventional signs (of the map legend), largely pictographic sign-sketches of settlements' dominant buildings with the 'most representative power' were used for guidance. This points to an interesting fusion of, or at least interaction with the actual map, individual cognitive map, and [orientational] schema originating from socioculturally traditional use of the environment.

The first worldmaps had a similar nature, i.e. — familiar objects were used to represent the world-view transmitted by a relevant work; thereby those objects usually belonged to the sphere of cultural units. Naturally, these kinds of objects were dependent on the ideology and religion currently at power — this can be explained by two reasons. On the one hand this was due to purely pragmatic considerations (e.g. mere problems of censorship connected with the publication of a map), and on the other — such a map needed to be understandable i.e., it had to be socially accepted (or at least acceptable), readable in its contemporary sociocultural context. Hence, one can also associate the *mappaemundi* of this kind with projections of the ideologised *Umwelt* of a socium. Society's world-view was mirrored in the constituents of a (world) map. The world was represented through the culturally 'most concentrated' objects i.e., through the most well-known objects of the known settlements; so the signs used can also be called iconic-indexic (representing a settlement by means of a building and also indicating its location).

However, the set of signifiers in such maps was already in tandem with ideological motivation (e.g. the 'concentric construction' of the world), so that when considering indexicality as the primary function of the original iconic sign, it already had at the same time a strong connotative flavour (see also Singer 1991: 103–106). On the level of the sign, the composition of maps becomes, from here on, more and more abstract and tied up with connotations. Correspondingly, at interpretation, a map demands more and more knowledge, as well as the prerequisite of being of well informed about the relevant ideology (see fig. 10 as an example of that 'transition period). The level of socialisation of signs brought along a change towards greater abstraction in their nature (for a similar tendency in contemporary life see Krampen 1983).

Figure 10. An extract from *Palestine* (from *Theatrum Orbis Terrarum*) by Abraham Ortelius (1570).

From the given map we can see that the area depicted still has a definite dominant city (Jerusalem in the circled area), but we can already note hierarchisation in their description. The development of the latter process led to the use of conventional cartographic signs, according to the importance of a relevant settlement. This of course required knowledge at interpretation, just as well as anticipation of the ideological conception of the composer of a map by its user (as there was no legend for reading a map yet). This period marked the change of cartographic devices to continuous abstraction in the direction of conventional signs in the form of a map legend. That change, however, progressed from the indexic-iconic signs to symbols in the sense of cartographic conventional signs through the loading of the former with extensive textual baggage (see fig. 11).

Figure 11. Excerpt from *Carta Gothica* (later *Carta Marina*) by Olaus Magnus (1539).

For the signification of the 'culturo-spatial' contents of a represented territory, textual code was used more and more for the purpose of commenting upon cartographic signification; the latter developed further towards 'signification' condensed into iconicity (in the form of a cartographic legend). For instance, this excerpt from *Carta Gothica* (later *Carta Marina*) by Olaus Magnus (1539) depicts an area to the North of Finland, and has a comment for an image of a boat: "Many boats are built here and they are fastened with reindeer sinew" (see Ehrensvärd et al. 1997: 156). One may also evaluate such a tendency as inclined to the mercantile worldview:

> "Western Europe viewed the rest of the world in terms of Newfoundland fish, Canadian furs, Spanish-American gold and silver, African slaves, Chinese silk and porcelain, Asian spices, and so on" (Campbell 1981: 8).

This mercantile interpretation of the world clearly departs from the era in which, for example, Prester John or the Fountain of Life were appreciated as objects in the environment: chorographic representation of the world melted into the cartographic. This involved a change in maps toward the less

representational and less representative in the aspect of depicting cultural history (in an explicit manner); therefore, we will not proceed to examine this further.

The semiotic status and function of the sign in culturo-historical maps

The above briefly sketched the evolution of signs in maps may be associated with two complementary axes: 'index — symbol', and 'mimesis — conventional representation' that both are to do with the topic of the scientific and the artistic discourse. Semiotically, these two oppositions are of course interconnected: the second one characterises the level and the type of modelling, depending in turn on the solution of the first opposition. As also mentioned above, we are not dealing here with a binary alternative, but with poles of an axis of characterisation of the sign type. These two oppositions also hint at a possible solution to an illusive difference between semiotics of culture and semiotics of sign. In connection with the symbol as a means of construing a model, we have to refer to a treatment of model by E. T. Hall, who asserts the function of the model for an artist (the authors of the maps viewed here were definitely artists, too) to be an instrument for filling gaps in visual memory. For this reason a model is a pseudo-reality (compare with Merrell's treatment of 'semiotic reality', see e.g. Merrell 1992: 39–40, 44–45) created in the course of communication (see Hall 1981: 12). For Hall, this is connected with the 'screening function of culture', which lies in socium's self-defence against informational overload (Hall 1981: 85). Taking this treatment into account, symbol, as an information carrier, has hence quite an ambivalent constitution, comprising of informational condensation on the one hand, and on the other 'postponing' the decoding of information (as a 'minus device'). This kind of possible mutation of information contained in messages, or even shelving or exclusion of it from a message, is avoided by 'internal contexting' (Hall 1981: 117) on the level of the individual. Such possible deviations are automatically corrected according to a situational frame. The creation of the frame is, in turn, no doubt relative to differences in sign situations, primarily of course with the, so to speak, limits of the sign.

Another, perhaps somewhat indirect, possibility for the current theme to clarify the characteristics of signs via their taxonomy may be based on an opposition of the nature of general semiotics. Here the unit of information transmission making natural semiogenesis possible is the signal or the natural sign as a transmitter of data with an *in-formative* structure. Thereupon the other pole of the relevant axis of description would be the sign as a transmitter of *meaning*. In such a case a criterion of differentiation is information, its enrolment into the structure of communication of the source of information (see Chertov 1993: 16–22; Hoffmeyer and Emmeche 1991: 117), limits of interpretation that still preserve the meaning (see also Eco 1990), etc. Anyhow,

despite the terminological resolution of the taxonomy created, the structural moment of the hierarchy of sign is the level of its connection with referent also in the case we apply the Peircean conceptions of the index and the symbol so as connected to the concrete and abstract reference (see fig. 12a, 12b).

Index ← – – – – – – → Symbol

[This is] the facade of Tartu University's main building

Alma Mater

Figure 12a; 12b. Excerpt from *Map of Estonian Cultural History* (1975) by Olev Soans. Excerpt from *Map of Estonian Literary History* (1978) by Olev Soans.

So, a structural criterion for a taxonomy of signs, on the level of general semiotics, is the 'naturalness' of the connection between the signifier and the signified, the connection of the sign with its referent (see fig. 12a, 12b). Evidently, this kind of differentiation possibility does not apply for the sign vehicle (or Representamen), but precisely for classifying the sign as a complex whole. From the point of view of the current work it is important that at the decrease of a sign's connection with its referent, the level of 'sign's' specialisation, but also the level of its generalisation (in the sense of being context-specific) — rises. The simultaneity of such specialisation and growth of abstractness may seem paradoxical at first sight, but one can compare the logic with the so-called elaborate and restricted codes described by B. Bernstein (see Bernstein 1966). Due to the close relevance of its object and representamen, just as well as due to the chronological and/or spatial proximity of the relevant semiogenetic and interpretative activity, the index can be called a 'lump' that can trigger infinite semiosic clues. The symbol, on the other hand, is rather a 'descriptive' signifier. A respective dispositional axis of the sign-function would thus be proposed in (see fig. 13).
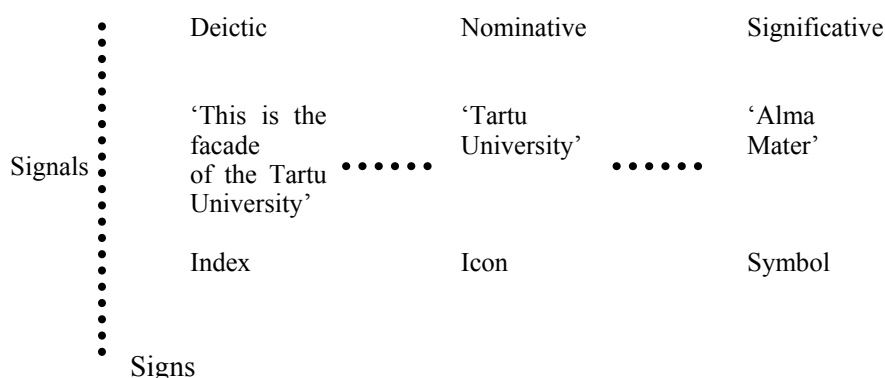
	Deictic	Nominative	Significative
Signals	'This is the facade of the Tartu University'	'Tartu University'	'Alma Mater'
	Index	Icon	Symbol
Signs			

Figure 13. Functions of signs in artifactial maps.

Here the sign appears as an individual synthetic category, while the signal can be viewed as only potentially a semiotic unit that carries information just as far as meta-interpretation is concerned in the sense discussed above in connection with D. Nauta's differentiation of types of semiosi (Nauta 1972: 33). As we saw above, in contemporary semiotics, one should avoid using the expression 'sign' for designating a certain type of sign, since often the respective definitions are wholly contradictory (e.g. in the case of the 'symbol'). This way, pointing at the conventionality and context-specific nature of such a mode of signification, we can regard the 'sign' as a category of generalisation. At the same time we cannot form such a generalisation, if we remind ourselves of Peirce's 'semiotic potential' (in other words — the level of connection between the sign and the referent object) determining the type of a sign in terms of both the 'logic of a sign connection' (similarity, continuity, conventionality) and the 'modes of being' (Firstness, Secondness, Thirdness). Thus we come to the theme of intersemiosic fusion for which deixis serves as a 'fulcrum'. As S.-E. Larsen (1994: 262) has put it:

> "[So] if a sign system does not contain sufficient deictical elements, equivalents will always be produced, either in the same sign system […] or in an another sign system […]. Thus, the deictical function will always open for an intersemiotic activity" (Larsen 1994: 262).

Evolution of iconicity toward intersemiosic discourse

Above we viewed maps as possibly belonging to two principle categories one of which relates to the chorographic, and the other to the cartographic discourse. In actual analysis, especially when relating the topic to the dynamism between the artistic and scientific representation of the environment as combined with the

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very semiosic functioning of images of the world, we can probably find traces of very intertwined culturological and semiotic developments. On the one hand the whole complex topic is bound to culturological aspects that concern the understanding and representation of the surroundings, and on the other hand the issue has to do with the semiosic aspects of representation that bind the evolution of the use of signs with overall cultural developments. It seems that the distinction between the cartographic and the chorographic representation of the world, just as well as the separation of 'modern [scientific] cartography' form the previous, hypothetically ideologically distorted mapping, is not the matter of actual distinctive features, but that of convention. Both the creation and interpretation of representations of the world are to do not only with the communicative, but also with cultural and semiotic competence; thus the semiosic aspects of mapping bind, through socialisation, together the 'natural logic' of the semiosic development as described by C.S. Peirce, and the sociocultural environment that surrounds and enables the semiotisation of the biological and cultural *Umwelt*. It is the combination of the biological, social, and cultural dimensions that allow us to view both individuals and socii as information systems (see e.g. Ruesch 1972: 419–425), and to look into the semiotic structure of their production. For an example of the culturally loaded nature of even as laconic signifiers as cartographic conventional signs, we can refer to the signification of cities (but also of other objects and phenomena). At this practice, such symbolic signs seem to be used today that have a general feature of expressing certain connotations that have been socialised in the course of cultural tradition. In our case, these symbols that condensely reflect cultural history, have been concentrated into symbolic icons that are commonly associated with scientific mapping and the basic function of indexicality. From the semiotic viewpoint, the iconic, indexic, and symbolic functions, together with the chorographic and cartographic biases, can be easily found in maps until the beginning of the modern era of mapping, just as well as in practically any other cultural production associable with mapping also today. However, such fusion of the three semiosic clues does not indicate chaos, but such regularity of mapping which, in an interesting manner, coincides with the ontological semiosic development from Firstness towards Thirdness.

Amongst the preserved specimens of the first European maps there belong two main classes: worldmaps and trajectory maps (the latter including representation of at least both land and water routes). Both kinds of maps could be either verbal or pictorial, or structured by combined sign systems. The dominant items of representation in maps of cultivated world used to be cities as landmarks that enabled orientation both indexically (sequences of cities in route maps) and symbolically (the size of a pictograph signifying the relative importance of a city). The success of such mapping was in correlation with the recognition of objects represented in maps on the basis of similarity, and at the same time the artists' individual abilities of exact representation increased differences between images of the world and items in it. Thus it is probably

quite natural that the first conventional signs appeared in maps only in the 16th century (Skelton 1952: 11), at the same time still preserving certain ideological features that referred back to the iconic and symbolic aspects of the representation of cities (see fig. 14a, 14b).
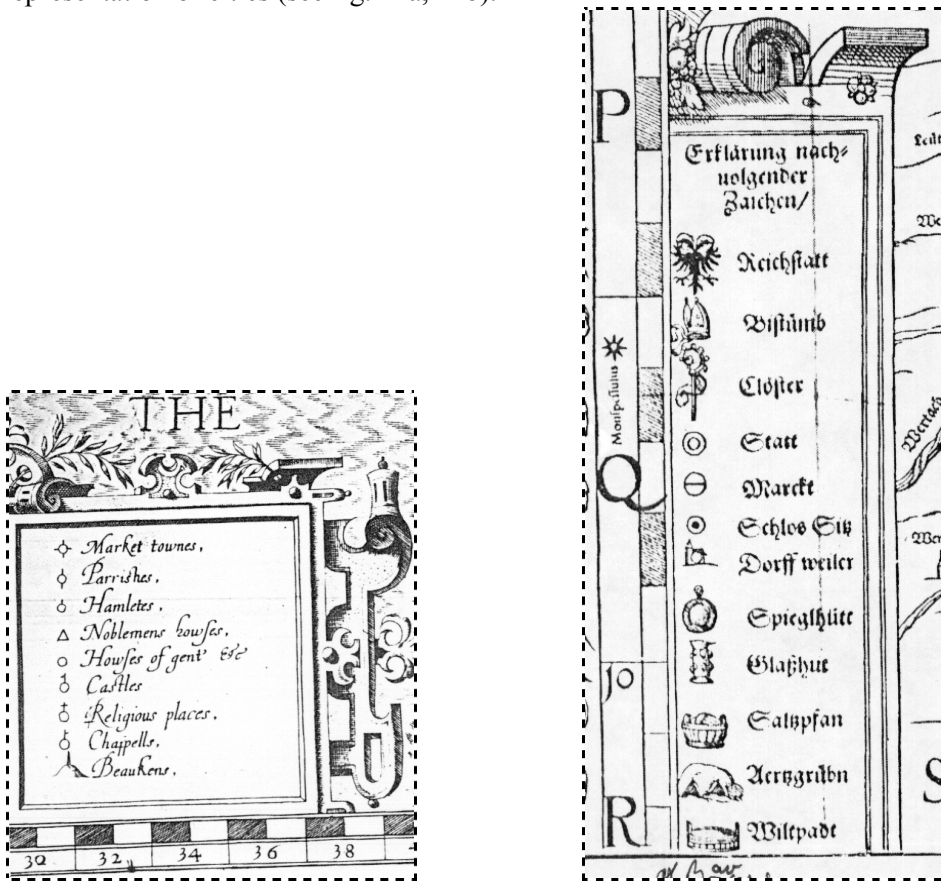

Figure 14a; 14b. Excerpt from P. Apian's map *Baierische Landschaften XXIIII* (1568). Excerpt from J. Norden's *Sussex* (1595).

The depiction of regions by 'most representative' landmarks that belonged to the category of the 'cultural' has been related to worldview in general (cf. also gradation of cities according to their importance by the size of the red star in maps of U.S.S.R). At the same time the use of pictographs connected the sociocultural discourse about the environment with construction of the mental map on the level of individuals (see Lynch 1960). Thus the widespread use of pictographs that developed into conventional signs is probably explainable by the standpoint, according to which the picture is an "[...] ideal symbol that reproduces our visual image" (Skelton 1952: 10). Simultaneously that visual image was informative also of the sociocultural context, even if considering the

reduction of it to conventional signs: the first maps that used conventional signs indicated royal palaces, bishopric estates, battle and religious spots, etc. (cf. the connection between the pragmatic and symbolic function of indexes and *imago mundi* in Singer 1991: 103–106).

Following Ch. Peirce, F. Merrell associates icon with 'pure consciousness', i.e.:

> "[…] the icon is most deeply rooted in pure consciousness, that is, in immediate awareness before there is awareness of something as such-and-such. It is a representamen to what it represents, and an immediate image for the mind mediately to interpret. Moreover, an icon can also belong to past experience. It exists in memory as a might possibly be, as part of one's background knowledge lying in a state of readiness to be conjured up in the mind (though this is not always an intentional act, for memory is often a dictational censor)" (Merrell 1991: 249–250).

Let us add here also a C. W. Spinks' citation of Peirce on the communicative status of the icon:

> "The icon is 'the only way of directly communicating an idea…; and every indirect method of communicating and idea must depend for its establishment on an icon or set of icons, or else must contain signs whose meaning is only explicable by icons' (CP: 2.278). The Icon is the initial complexus of the Semiotic, and it is the basis of hypothesis, discovery, and all deductive reasoning" (Spinks 1991: 445).

From here we can see that the icon is not so much definable as a similarity-based reflection of an object, but more as a model that has been constructed to (re)present an object. Comparatively, the icon, in respect to its boundedness with referent (in the aspect of chronological and spatial contiguity) is observable as a sign pertaining to the present; the symbol is called into being i.e. 'something' is cognised, if a certain set of presuppositions is actualised in a certain context. Thus, in its general features the icon is intensional, the index extensional, and the symbol binds extensionality with immediate consciousness (see Merrell 1991: 249). Therefore, we are not dealing with the sign(-vehicle) as a 'representamen', which would allow isolated treatment, but with a most eloquent example of the sign as a key constituent and trigger of both secondary and tertiary modelling systems. Consequently, we can consider the alike signs as elementary constituents (e.g. the 'geometrical archetypes') of Habit, which acquire their functionality through Thirdness. Spinks has noted:

> "The semiotic punctuation of Pure Firstness is a digital approximation of an analogue continuum, but at the same time the regularities of icons are the beginnings of periodicity. The correspondence may be of the sign to its object, but the calculation of the sequences of event into the regularities and repetition of periodicity is the breaking of Chance by Habit, for Habit is a periodicity!" (Spinks 1991: 451).

So, we can summarise the course of the process of cartographic signification sketched above, both from the aspect of cultural semiotics and in respect to the semiotics of the sign, in the form of the following range: (a) semiotisation of a unit of 'physical reality', and its transformation into a cultural unit → (b) conventionalisation of interpretation of a cultural unit → (c) transformation into an icon → (d) conventionalisation of the icon → (e) schematisation of the interpretation of the icon. This semiosic development can be related to general structures of culture as the latter is opposed to its source, the 'non-cultural' (see fig. 15).
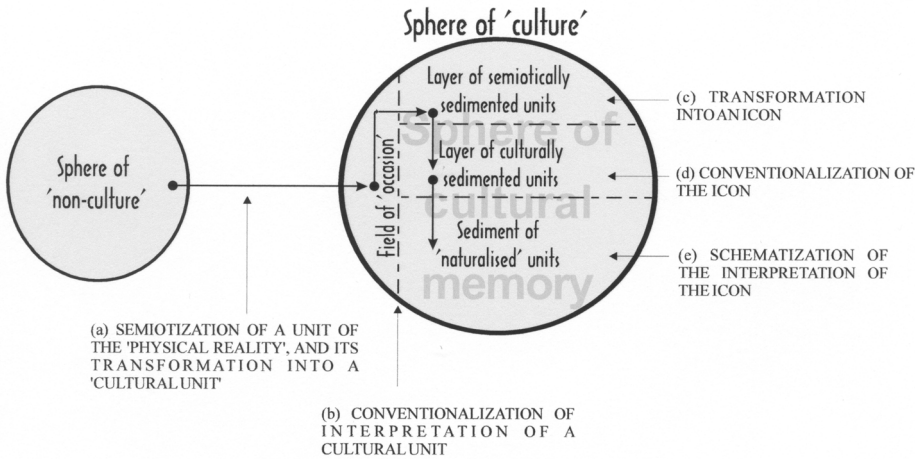

Figure 15. The course of evolution of cartographic semiosis as an example of interrelated semiotic processes on the level of the sign and of culture.

In the current figure, the sphere of culture has been split into two: (a) field of 'occasion', and (b) sphere of cultural memory. The first is the zone making cultural development possible both via intracultural circulation processes ('cultural units' that diachronically pass the zone of activation and re-semantisation, contacting thereby with the zone of 'occasion') and via culture's collisions with that which, from an 'insider's' viewpoint, remains outside it. We can demark the borderline between the field of occasion and the sphere of cultural memory by conventionalisation of a cultural unit, i.e., by sociocultural registration of a unit as belonging to cultural discourse proper. In turn, the sphere of cultural memory is divided into three layers: in the first one semiosic tensions are settled and brought together into a sign (it does not seem to be proper to equalise 'cultural units' with purely semiotic phenomena). The second layer is concerned with cultural adjustment of the results of the previous level with cultural tradition. This is connected with 'legislation' of the interpretation of the sign according to cultural context, and its settling into the deep structures of cultural memory where, via the naturalisation process, its use becomes auto-

matic. In fact, one can also interpret such a development as a change from the iconic level of the sign to the level of the symbol — via the schematisation of the interpretation through the icon — and reach the notion hypoicon (Peirce), but in our context the example rather serves as an instance of the complementary nature of social and cultural semiotics, and of the semiotics of sign. An additional development of the conventionalisation of such iconic representation that has indexical functions to the symbolic use of images of concrete entities as mis-targeted or even non-existent referents has been pointed out by E.H.J. Gombrich by examples of the exploitation of pictographs of actual places as universal conventional signs (Gombrich 1996: 94).

Such a course of development of a unit from the outside of the cultural discourse into and inside the latter, can be illustrated for example by the semiosic schematisation of the distinctive features of dominant buildings to a reduced image (e.g. the above example of the case of Tartu and the Tartu University). This kind of process is definitely also influenced by social and other factors (trade, tourism). Consequently, we have to admit the interconnected nature of 'reality' and semiotic reality, and the intertwined nature of semiosis on the textual level and on the level of the sign. Interpretation of representations of the physical realm is influenced by the 'semiotic luggage' of cultural memory, subjecting in turn those very representations to social reflective semiosis. Therefore it does not seem to be correct to view products of humane semiosis as meaningful through their [internal] textual structure, but to analyse them as manifestations of society's understanding of the meaningful world i.e., to analyse them not as 'semiotic phenomena', but as 'semiosic phenomena', the latter hinting at sociocultural meaning-making, and involving also thereby analysis of the semiotic status of signs as it has developed in the course of sociocultural semiosis. So, when we picked up maps as [spatial] illustrations of the conceptualisation of space, we met the intersemiosic nature of different relations: text and signs that form that text, intersemiosis on the very level of signs, on the level of relations between signs as units representing physical reality and the latter itself. Also, it is important to note that the contrasting of the text and the image — the former taken as a representation of the latter (e.g. map as a text representing 'image of the world') —, and relating them respectively to structural analysis (assigned to cultural semiotics) and sign-semiotic examination, ought to be replaced by an understanding of their complementary nature.

CONCLUSION

There seems to be little grounds for making any static conclusions of the current work. Rather, we could suggest several possibilities and ways of developing what has been said. On the other hand, if that view be shared by the reader, the written has served its purpose in the implication that all cultural production is due and born in a complex — though not that complicated — intersemiosic web. Our approach to viewing knowledge and understanding of the world was based on the concept of modelling. That superficially general notion helped us to conjoin the two great traditions of the study of signs, just as well as to see connections between several disciplines of the study of man (that has, of course, been noticed also earlier).

An important aspect that helped us to re-state the nature of semiotics as belonging to the social sciences was due to going back to the pragmatic dimension of semiotic studies by re-defining the research complex. Instead of approaching the analytic set as composed of an 'object' and a researching 'subject', the pragmatic angle involves the users' definitions of the cultural units. This analytic triplet took us to acknowledging dynamism between the several levels of modelling the world, including that between cultural autodescriptive texts and the so-called scientific discourse. It seems that it is both unjust and semiotically detrimental to make distinctions between different types of discoursing about the world in terms of the 'artistic' and the 'scientific' when we are talking about a concrete cultural epoch. The 'artistic' and the 'scientific' are so-to-speak mild expressions for referring to 'scholarly' and 'non-scholarly' thinking, and sometimes they have been associated with the 'developed' and the 'primitive', or the 'rational' and 'irrational'. Be it seemingly insignificant or even simplistic, it is important to neglect evaluative positions towards any outcome of the modelling of the world. As we saw, the mapping of the world in the chorographic tradition involved various dimensions of cultural reflection, including the seemingly irrational or fictitious elements. That, however, does not push such mapping (or mapping in the 'primitive' cultures) of the world to a 'non-scientific object-level'. What we nowadays can associate with conscious metalevel activity, are reflections on the mainstream model of the world. By those we primarily refer to the emergence of the utopian discourse that both served as sociocultural criticism and — what semiotically at least just as important — invented a new strategy for enlarging the semiotic reality by the creation of alternative spatial structures filled with alternative sociocultural units and communities.

As we could see, the semiotic reality encompasses units of concrete reference, and besides those belonging to the utopian discourse, also items of abstract reference. The latter may be interpreted as pseudo-concrete or 'not-yet-empirically-proven' meaningful structures (e.g. religious and mythological

items in maps). Yet we could admit that the modelling of the world involves several layers both in the semiosic sense, and also in the aspect of the coexistence and interaction of the physical, sociocultural and utopian realms. The semiosic development of representing the world seems to be analogous to the logic of the development of individual semiosic powers (three principal sign relations, three levels of sign potential from Firstness to Thirdness).

A matter of great consequence that is connected with the different parallel realms of world representation, has to do with the presentation of regions peripheral in oikumenic terms. During the times our examples came from, interactive communication tended to shift to unilateral semiotisation of faraway countries. We could see the functionality of the semiotic square based on 'culture' and 'nature' at the description of the structure of representational items in maps. The ideologisation and mythologisation of those categories seemed to be the basement for the formation and development of the Eurocentric worldview that was relatively easily cultivated through maps as educational divides. The ideologisation of the categories of the semiotic square entailed changes in the comprehension of the above-mentioned dimensions of the surrounding environments. Not only could we speak about the physical, religious or utopian realms, but the features of those spheres became to be applied to selected individual items, be those either of concrete or abstract reference. Recalling of the fusion of the autodescriptive discourse and the metalevel, we could see how the 'as-if'-premise of explaining the world worked throughout the extensive chain of information production that ended in artifactial maps, influenced the pragmatic decisions of European sociocultural behaviour. That sociocultural behaviour, in turn, did not remain ideologised only in the practical sphere (e.g. evangelisation, colonisation) but, due to the all-encompassing representative function of maps and their educational occupation, involved also the shaping of the semiotic reality in terms of the spread of sign-relations to the multiple realms of social and semiotic systems. The becoming vague of the mythological and ideological roots of the institutionalised signs of the world (following the logic of the 'life of signs in a community'), and the use of them in very diverse spheres of life helped to merge the original 'as-if'-premise into the background of semiotic systems, and thus switch it into the objective, if not ontological characteristics of signs and objects.

The mixing of the objective and subjective, and the ontological and the epistemological, and the respective function-attribution to either existing or invented phenomena and/or beings, brought along concrete pragmatic results in the political, economic, sociocultural behaviour of the Europeans in all continents. On the other hand, changes that were brought along by new encounters in the physical environs, entailed alternations also in the semiotic reality which, in turn, lead to reconsideration of the internal structure of European communities. That meant changes in the social statuses and roles, but also new interpretation of the semiotic nature of certain individuals. Thus we really but have to see the dynamic nature of the structural and the processual

approach to the sociocultural phenomena, and the interaction between the definition of the physical, social, and cultural objects of the communicative situation. The mutually influential nature these objects is organised through institutions as containers of sociocultural continuity. As proposed in early semiology, sign systems as institutions maintain the structure of the conceptual and expressive compounds of the semiotic reality. In the same manner, early structural anthropology suggested crystallisation of the social order in the spatial structure of a community. Inasmuch as the social structure often involves the representation of the cosmological, sometimes also of the cosmogonic realm, there exists homological crystallisation between several representational systems that are to do with the three above-mentioned classes of objects of communicative situations.

Putting the above in other words as related to the structure of the current work, we could see that there no reason to set the metalinguistic perspective on studying sociocultural phenomena neither in the textualist nor the organicist terminology. There can, however, exist indications for the explanation of meaningful units as texts or as organisms on the object-level. On the other hand, associating textualism with structuralism, and organicism with processualism, we could approach the topic of the study of culture and society in the contemporary terms of 'parts and people'. The combination of 'cultural tradition' and 'sociocultural institutions' allowed us to probe into the intersemiosic web forming and characterising 'cultural epochs'. The principles of construction of coherent cultural production could be grasped through autodescriptive texts.

The sociosemiotic approach to culture could be proposed exactly by the application of comparison of texts and epochal metatexts i.e., cultural texts as structures could be set into a semantic perspective by viewing them in the process of sociocultural reflective praxis. That pragmatic aspect of semiotisation allows to conceive the sociosemiotic approach to analysis as composed of the following modules: Researching Subject, Informant(s) and Object. The formula can be imagined as:

$$\text{RS} \quad \left\{ \begin{array}{l} \text{SI}_1 \\ \text{SI}_2 \\ \text{SI}_n \end{array} \right\} \quad \text{O}$$
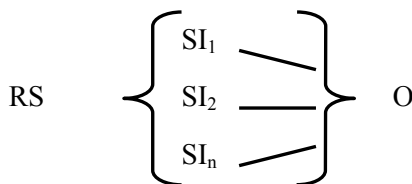
We could see that cultural anthropology, or ethnoscience, or ethnomethodology, principally arrived at the same set of counterparts in the study of meaningful phenomena. The self-explanatory discourse is the key for thick description that, at the same time, must not forget the aspect of thin description as the formal depiction of objects against which reflective discourses can be compared. Thus the sociosemiotic perspective relies much on the triadic sign conception, though

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not neglecting the semiological one either, and connects the 'socialness of things' with the modelling activity which implies principal links between multiple levels of the semiotisation of the world from the biological to the post- or extralinguistic sign systems. Thus sociosemiotics re-unites the three main dimensions of the semiotic research (semantics, syntactics, pragmatics) and thereby also diverse segments of the 'subsemiotic' disciplines and metalanguages of social sciences, offering again a holistic view on meaningful phenomena. At the end of the chapter we saw that understanding the world depends on man's needs of creating his *Umwelt*, sign systems and the semiotic reality that are provided him through socialisation. Socialisation, in turn, is largely performed via representations that are filtered by sociocultural institutions that shape the semiotic reality by outlining its central and peripheral components, deciding amongst other issues what to maintain of the traditional and what to switch into cultural discourse of the novelties confronted either in physical reality or invented by the mind. Such semiosic limits of a semiotic reality implied the inapplicable nature of such semiotic research that would neglect the role of informants and set the analytic standpoint outside the semiotic reality. Therefore we had to leave behind the notion of semiosphere for the 'semiotic reality'. The latter concept allowed to outline several dimensions of reference and individual meaningful paradigms that may be interconnected to diverse degrees.

In the last chapter we faced examples of the interconnection between different levels of modelling, just as well as of the techniques of modelling that conjoin several spheres of meaning (e.g. the creation of utopian spaces). Such unity of the semiotisation of the diverse aspects of the semiotic reality involved the fusion, or at least relativity, of 'scientific' and 'artistic' discourses. As we saw above, individual representations can be subjected to textual analysis in terms of outlining the relations of their elements by the semiotic square. The categorisation of those elements, in turn, depends on era-specific understanding of the world in terms of abstract and concrete reference, and views on the physical and semiotic realities. The application of the ontological and epistemic, and the objective and subjective features can help to differentiate between the social and fantastic realms. In a roundabout manner, the latter are connected with the semiosic logic of modelling the world that shares common principles both on the individual and the sociocultural level, just as well as during the evolution and succession of cultural epochs.

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SUMMARY IN ESTONIAN

MAAILMA KAARDISTAMINE:
KULTUURI SOTSIOSEMIOOTILISE KÄSITLUSE POOLE

Käesolevas töös on vaatluse alla võetud maailma modelleerimine sotsio-semiootilisest perspektiivist. Üldises semiootilises paradigmas võib öelda, et igasugune modelleerimine on märgiloome ning igasugune märgiloome, niivõrd kui seda peab teostama mingis märgisüsteemis, on modelleerimine. Selles mõttes võib töö näida väga pretensioonikana. Liiatigi, kui silmas pidada seda, et maailma modelleerimisega tegeletakse juba ka bioloogilisel tasandil. Nii hõlmab modelleerimine maailma tähendustamise kui nn. omailma loomise bioloogiliste olendite ja nende liigipäraste võimete perspektiivist, aga ka selle, kuidas tähendustatud maailma (liigisiseseltki) jagatakse. Seega, rääkides inimkultuurist, puudutab modelleerimine tavapäraselt ka keelt ning keele-põhiseid märgisüsteeme.

Modelleerimine saab olla seotud maailma tähendustamisega nii implitsiitselt ehk nn. varjatud käitumises, kui ka suhtluslikul eesmärgil. Suhtluslik aspekt, mida me (sotsio)semiootiliselt saame analüüsida, lisab maailma tähendustamise uurimisele esmalt tavapärased kommunikatsiooniuurimise aspektid (kes? ütleb mida? missuguses kanalis? kellele? millise mõjutulemiga?). Suhtluslik aspekt on ka see, mistõttu tänapäeval räägime sotsiosemiootikast kui niisugusest püüdest minna tagasi semiootika kui terviktteaduse juurtele, mis pööraks tähele-panu pahatihti unustatud pragmaatilisele uurimisdimensioonile. Nii võib käes-oleva töö metatasandilist terviklikkusepüüdu näha kui sellist, mis peaks ühendama semiootilise ja semioloogilise, semiootilise ja sotsioloogilise, semiootilise ja (kultuur)antropoloogilise perspektiivi. Loomulikult on täna-päeval juba jõutud enamiku ühiskonda ja/või kultuuri uuriva distsipliini integreerimisele kirjelduskeelte ja –objektide segundamise kaudu, ning ilmselt on nii või teistsugusel viisil peagi taas päevakorral poliitilis-majanduslik-sõjanduslike asjaolude tõttu unarusse jäänud nn Ühendatud Teaduste (*Unified Science*) temaatika.

Töö esimene peatükk tegeleb kultuuri kirjeldamise keeltega. Meelevaldselt võib ühe kaalukama keelevalikuna tuua tekstualismi ja organitsismi; see on ka dilemma, mille kontekstist hakkasid arenema tänapäevased ühiskonna– ja kultuuriuuringud. Hoolimata 'teksti' või 'organismi' mittekasutamisest semio-loogias ega semiootikas, on tekstualistlik ja semioloogiline perspektiiv strukturaalantropoloogia kaudu ühendatud nendesse keele– ja kultuuriuurin-gutesse, millest kasvas välja kultuurisemiootika. Teiselt poolt võime semiootika arengu, eriti nii, nagu see toimus laienevalt mitmetesse distsipliinidesse, seos-tada organitsismiga, mis muundus instrumentalismiks ning (seejärel) käitumus-likuks analüüsikaldeks (*behaviourism*). Nõnda võib öelda, et algne dilemma

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tekstualismi ja organitsismi vahel arenes valikuks struktuuri– ja protsessi-
uuringute vahel ehk teisisõnu: kultuuri– ja ühiskonnaanalüüsi vahel. Sotsio-
semiootilisest ning tänapäevasest vaatepunktist saab öelda, et 'osade' ja
'inimeste' ehk kultuuri ja ühiskonna uurimine ei saa olla edukas ilma struktu-
raalset ja protsessuaalset aspekti ühendamata. Konkreetses analüüsis kajastub
taoline ühendus sotsiaalsete süsteemide ja nende kontekstide vaatlemises
füüsi(ka)liste, sotsiaalsete ja kultuuriliste objektidena, mille staatus on suhtlus-
sõltuvuslik.

Teisest küljest käsitleb esimene peatükk teksti ülesehituse ja loomise põhi-
mõtteid nii, nagu need on seotud modelleerimisega nö. eelartefaktilis(t)el
tasandi(te)l. Sel moel saame vastavusse viia kognitiivse kaardistamise (ehk
modelleerimise) uurimise tekstistatud kultuuriloomingu uurimisega.

Kolmas aspekt kultuuritekstide kirjelduskeeltest on seotud teatud distsipliini
või objektiga 'harjutatud' metakeele ülekandega algsest erinevatele vald-
kondadele. Siin puudutasime eeskätt just tekstualismist tulenevaid metafoorseid
kasutusi ning nägime, et nö. 'justkui'-käsitlused võivad oluliselt moondada
uurimisobjekte. Teiselt poolt on metaforism täheldatav ka kultuuri enesekirjel-
duslikes tekstides ning vastavalt seotud ka ühiskondade- ja kultuuridevahelise
suhtlusega ning eeskätt ühepoolse tähendustamise kaudu, semiootiliste subjek-
tide loomisega. Järelikult on maailma modelleerimise temaatika alati seotud nn.
füüsikalise ja semiootilise reaalsuse omavaheliste suhetega ning konkreetse ja
abstraktse referentsi omavahelisest relatiivsusega.

Tekstitemaatika, nii nagu see on seotud tekst-koodi ja koodtekstiga,
võimaldab läheneda ka artefaktilise modelleerimise intentsioonidele ning see-
läbi teha kindlaks nende kultuuritekstide struktuuri nii, nagu see on seotud
ajastuliste kultuuriteemade ning füüsilise ja semiootilise reaalsuse segmenteeri-
misega (ka tähistuslikus aspektis).

Eraldi sotsiosemiootikale pühendatud peatükis peatusime esmalt mõnel seda
valdkonda määratleda püüdval käsitlusel, ning jõuame järeldusele, et sotsio-
semiootika ülesanne peaks keskenduma just kultuuri ja ühiskonna koosarengu
vaatlemisele selles mõttes, et (taas)ühendada semantiline, süntaktiline ja
pragmaatiline perspektiiv. Ehk teisisõnu: tähenduslike üksuste uurimine eeldab
seda, et semiootilisse uuringusse kaasataks nende üksuste kasutajate arusaam
oma tegevusest. Maailma modelleerimise käsitlemise puhul peaksime seetõttu
eelistama nö. sotsiaalselt representatiivseid teoseid. Kui me püüame analüüsida
seda, mis on maailma tähendustamist mõjutavad tegurid, tuleb meil teatud
epohhi (sünkroonia) uurimiseks keskenduda selle taustale ehk (ka) ajaloole.
Seda saame teha just kultuuritekstide kaudu, mille korpuseks on käesolevas töös
valitud kaardid kui sotsiokultuuriliselt representatiivsed teosed selles mõttes, et
nende produktsioon eeldab laialdast ühiskonnagruppide koostööd ja kokku-
leppimist erinevate ressursside kasutamisel, ning teiselt poolt sätestub represen-
tatiivsus kultuurimäluga ehk säilitamisväärse väljavalimisega eri ajastute vältel.
Nõnda on kultuuritekstide loomine seotud kõigi uurimisetappidega, mis kultuur-
antropoloogias on sätestatud (alates 'välitöödest' 'inimajaloo rekonstrueeri-

miseni'), ja seega ka 'kultuuri' mitmesisuliste määratlustega (alates 'käitumis-kaardist' ja 'ühisõppesüsteemist' 'teooriani'). Seepärast nägime, et reaalses analüüsis pole võimalik eristada 'teaduslikku' ja 'kunstilist' ('mitteteaduslikku') kirjeldust, vaid kultuuri enesekirjelduslike tekstide puhul on need sageli segunenud. Sellele annavad kinnitust ka vastavate kirjeldustekstide loojate kommentaarid, mis omakorda viitavad kultuuriepohhi seesmisele ja ka ajastutevahelisele intertekstualiseerumisele nii struktuurilises kui ka funktsionaalses aspektis (nt maailma ja selles sisalduva modelleerimise homoloogiad). Need aspektid koonduvad ajastuspetsiifiliseks intersemioosiseliseks tekstiloomeks, mis ühendab nii erinevad märgisüsteemid, kui ka märgiloome eri tasandid nii modelleerimise suhtes, aga ka individuaalses ja sotsiaalses aspektis.

Modelleerimise vastavad tasandid on omakorda seotud ühiskonna– ja kultuurinägemusega ning semiootilise reaalsuse segmenteerimisega ka tinglikkuse aspektis. Sel moel seondub keskkonna modelleerimine metavajaduste ja nn. ideaalkultuuriga. See puudutab sotsiaalseid süsteeme moodustavate sotsiaalsete, kultuuriliste ja füüsikaliste objektide määratlemist nii, nagu see sõltub nägemusest 'reaalse' ja 'semiootiliselt reaalse' vahekorrast. Arusaam 'reaalsest' ja 'semiootiliselt reaalsest' on seotud nii 'tegeliku maailma' kirjeldusliku sisuga ja utopistlike kirjeldustega, aga ka sellega, millisena nähakse ajastuspetsiifiliselt ühiskonna sisu ja inimese staatust. Eri rasside staatuse ja funktsioonide kirjeldused kaasasid keskajal teema sotsiaalsete tegelaste teleoloogiast ka (Euroopa kaardimeistrite) ühiskonnasiseselt. Nii lisandus ühiskonna struktuuri peale nö reglementeeritud institutsioonidele ka teatud üksuste semiootiline staatus/funktsioon (Puuduva Lüli temaatika ning inimteated nn. friikide puhul).

Maailma modelleerimist ja selle artefaktilisi väljundeid puudutavas peatükis nägime, kuidas 'keskkond' sõltub semiootilisest reaalsusest. Vaatluse alla võtsime kaardid, mis pärinevad eurotsentrilise maailmavaate loomeajast ning mis on oma haridusliku sotsialiseeriva funktsiooniga olnud nn. teadvustööstuse tööriistaks sajandeid, ning millel ka kaasaegne 'maailma teaduslik kaardistamine' põhineb. Nägime, et tollel nö vundamentajastul, mil maailma kaardiline kirjeldus toimus — nagu sageli mainitud — religiooni prillide läbi, sisustati Maa nö. tavapäraste füüsikaliste objektidega, aga ka religioossete, fiktiivsete, utopistlikega. Peale väljamõeldiste elevantidest, mis varjutasid teadmatust kaugele alade tegelikust sisust, andis nn. Neljas Kontinent lõppkokkuvõttes võimaluse utopistliku diskursuse tekkeks, mis võimaldas nö. pretensioonitut sotsiokultuurilist kriitikat, aga teisest küljest lõi võimaluse kultuuriloome loogikaks printsiibil 'uus/alternatiivne ruum — alternatiivne kultuur (ja ühiskond)', mis kehtib ka tänapäeval. Selline käsitelu annab uue(na näiva) sisu 'teaduslik fantastika' (*science fiction*) žanrile ning võimaldab aru saada 'teadusliku' ja 'mitteteadusliku' ('kunstilise', 'ideoloogilise') kirjelduse sümbiootilisusest ning sellest, kuidas kaasaegse kartograafia kui 'täppisteaduse' juured peituvad sajanditetaguses korograafias (*chorograpia*). Korograafia omakorda võimaldab näha, mil moel muutuvad kaardile kui tekstile rakendatavad semiootilise ruudu kategooriad (meie valituna 'kultuur' ja 'loodus') dünaami-

liseks ning maailmas sisalduva kirjeldamine püüdleb abstraktsesse referentsi kuuluvate nähtuste kirjeldamisele konkreetsetena. Ehk teisisõnu: kaasaja kartograafia lätteil toimus kultuurigeneetiliste tähenduslike nähtuste objektiviseerimine selles mõttes, et nende episteemiliselt subjektiivseid ja objektiivseid eristustunnuseid hakati kirjeldama ontoloogiliselt objektiivsena.

Eri kaarditüüpide areng ühtseks maailmakirjelduseks võimaldas vaadelda seda, kuidas artefaktiline kaardistamine täpsustus (eelkõige tänu merekaartidele), kuidas kaartidelt kadusid väljamõeldised (nt ükssarvikud, merekoletised jms) ning kuidas toimus liikumine leppemärkide poole. See areng on võrreldav inimese semioosiselise arenguga, nagu seda kirjeldati semiootika rajaja(te) poolt (ikoonilisest sümboolilisuse poole, Esmasusest Kolmuse poole).

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