

# Sociocultural Space and Time as Semiotic Modelling Systems<sup>[\*]</sup>

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## Abstract

In the paper I discuss how time as a sociocultural category is modelled by space and spatial concepts. I explain the mixed use of different object- and metalevels of descriptions of space at the construction of concepts of time and temporality at the interpretation of the sociocultural world. The "cognitive turn" in studies of culture and society has been accompanied with the risen focus on metaphor — descriptions of metaphoric processes as a main mechanism of culture on the object level of studies, metaphor as metalingual concept, metaphor in the metalanguage and the discussion on the concept of metaphor itself. Starting from the biosemiotic basis of cognition, through the interpretations of social practices (activities, events and their relations as social basis for 'time'), 'time' and 'space' become abstract notions. Space and time are semiotic modelling systems involving several (intermingled) relative object- and metalevels and are thus widely applicable modelling tools. The use of space to model temporal concepts and the mixed use of different modelling levels of one and the other, and the (over)use of the concept of metaphor, rises doubts about the 'temporality' and 'spatiality' of sociocultural phenomena (e.g. the city and its history) as well as about the ability to share the knowledge among different studies on time in the sociocultural field.

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For common knowledge the city is primarily a spatial phenomenon — urban space or a point in geographical space. The city has its history (that could be divided into conceptual and material history) and includes traces of that history. The experience of city, or urban experience, is thought to be particular in spatial and temporal terms. These ideas are not just explaining the city but also (or even in the first place) communicate the city as a conceptual phenomenon. The city as a conceptual phenomenon consists of various accounts (both prescriptive and descriptive) on the city. These representations again might become models on their own, to be used, for example, in self-descriptions of a society.

Common associations of the city and historicity show the important role of historical reality in the creation of material city as well as concepts of city. While Yuri Lotman states about the function of the city in culture that «The city is a mechanism, forever recreating its past, which then can be synchronically juxtaposed with the present.» (Lotman 2000: 195), then my aim is to relate this principle of dynamics of temporality (incl. history) and spatiality also to the metalevel of the city — descriptions of the city and the city as a description.

Although the space and time of the city can be extremely various, they can be considered as elements building some kind of coherence in the discourse on cities. As such, these can be related to the notion of *code* as used in the context of the semiotics of the city, in the analysis of settlement space by Alexandros Ph. Lagopoulos (2009; for an analogous use for regional space see Lagopoulos, Boklund-Lagopoulou 1992; and for architectural meanings by Umberto Eco in Eco 1986) to refer to «a structured set of sememes, or of sets of sememes, which constitute a classificatory matrix through which reality is interpreted, i.e. invested with meaning» (Lagopoulos 2009: 177). Taking space as a possible common *seme* of all the elements of the code, *space* (as a category) is a discursive part of the conceptualisation of the city. The same applies to *time*. Thus, it should be possible and fruitful to compare different conceptualisations of the city in respect to the *spatial* and *temporal* code that emerges, and with emphasis on the relations of these codes.

In the following discussion I provide a possible framework for understanding the modelling character of *space* and *time* in the concepts of the city. The subsequent discussion is organised around three main topics: the sociocultural space and time and their relation to the city; the city as an ideal model-object or model-reality for the society, its spatial and temporal aspect; the semiotic aspect of the city as an objectively given spatial and temporal environment-reality.

## 1. SOCIOCULTURAL SPACE, TIME AND THE CITY

The city and ideas pertaining to it are characterised by strong relations of society and space. This inseparability can be described from two points of view. The first one sees the (human) space as rooted deeply in the society and its culture; the other sees society with its culture as being deeply rooted in space. Thus, the first viewpoint deems the city to be a sociocultural system. And the physical space is a part of the general sociocultural system — it functions as an expression and physical form (projection) of meanings, social structures, traditions of practices, etc. The physical space as an independent reality and the sociocultural city, are intertwined exclusively through expressions or realizations of cultural models in space and representations of environment in culture.

Without considering this characteristic, we are likely to encounter difficulties in defining the city. These difficulties would largely arise from the fact that the field concentrated upon is either restricted to only one part of the whole phenomenon or formed only from manifestations of the city as a sociocultural system without containing the phenomenon itself. The city as a holistic object does not exist outside the sociocultural universe, and thus only sociocultural systems, for example, sociocultural space and time can actually matter in the city. Even if we acknowledge the city as being essentially a sociocultural system, we have to acknowledge that in practical discourses the city is specifically characterised by its physical space (and the culture-specific knowledge about it). Similarly, the space, experienced and filled with daily personal and social life, is the ground for culture, society and for each individual, and thus the defining characteristic of the city (e.g. Hillier, Hanson 1993). As a result, the city can here be understood as a process and a result of ongoing (spatial and temporal) communication in-between subjects themselves and subjects and the environment.

To explain the first approach, I turn to Pitirim Sorokin, an initiator of *integralist* sociology, who is best known in sociology for the term *social* (and *sociocultural*) *mobility* (1964a) and also for his social cycle theory in «Social and Cultural Dynamics» (2000). Partly in reflection of his own works, he also developed a systematic discussion on *sociocultural space* and *time* as referential principles of social sciences (Sorokin 1964b). Even though his discussion on *sociocultural space* and *time* (and *causality*) is not among his best known works, these concepts form an important systematic view on integrating the object level cultural knowledge and world view with the scientific studies. Sorokin's work in itself would be an interesting material for a study on spatial metalanguage and *space* as a modelling device.

Using Sorokin's terms we could say that the city as a sociocultural phenomenon is in the sociocultural universe, has place in sociocultural space and itself forms a limited sociocultural space. Studying the city as a sociocultural phenomenon and its space and time, some discussion of sociocultural space and time is needed. Sorokin (1964b) has given a discussion on it, which is most systematic but might be disputed in terms of applicability and groundings thereof. For him, the *sociocultural space* is a referential principle of sociology and social science

The *sociocultural space* is the static order of sociocultural universe — meanings, their agents, vehicles and their systems. It enables the positioning of these components in relation to each other, and thus the description of sociocultural world and also its changes. According to Sorokin, when defining the position of meaning, we put an accent on *cultural* systems, and when positioning human agents, we accentuate their *social* position (Sorokin 1964b: 134-135). Thus, the topic of sociocultural space and time can be approached from the *cultural* aspect, describing the field of meanings of the space, time and objects in these, or alternatively from the *social* point of view — *space* and *time* as systems of social positioning and as having specific relations to human agents, their social positions and activities.

As the objects in surrounding space are the vehicles (and agents) of the sociocultural system, its objectifiers, the physical spatial environment is itself sociocultural. At the same time, each culture has its general world model and concepts of space that follow its sociocultural world. This world model, for example a Christian (theological) one that is expressed in Augustine's «The City of God» (1950) and is built of religious values and relations, is essentially concerned with meanings. However, it is projected onto the physical environment and attached

to physical vehicles and agents during daily activities and descriptions of environment. Thus, the general cultural world model would also be conceptualised in concrete spatial terms, and involves physical objects as well as social relations of subjects. While this point of view projects the spiritual concept of the world to the physical-geographical space (e.g. religious meanings and values of countries and cities in *Christian geography*), there is also another tendency. For the latter, practical experiential space is used as a basis for explanation. Thus, in a following example (Swedenborg 1970) the practical spatial (*earthly*) environment (including stereotypical opinions about nations and cities, human agents and vehicles like equipment for dwellings) is used as a model to be projected to the spiritual sphere (*heaven*). If the general structural concepts of physical space depend on the general background of sociocultural conditions (for example, the dominance of the homogenic geometric space concept and its opposition to the qualitative space filled with meaningful places), the more specific conceptualisation of space, its qualitative characteristics and more concrete structure might be conditioned more by the concrete social level — the practices of agents that realise and objectify the meanings in space.

Furthermore, describing the *sociocultural space* as essentially different from physical space, Sorokin attempts to associate it with *sociocultural time*. Sociocultural time according to him «conceives and measures sociocultural phenomena — their duration, synchronicity, sequence, and change — in terms of other sociocultural phenomena taken for the point of reference»; its main characteristics are that it is qualitative, having indivisible units that are of social origin, not flow on evenly as a mere quantity, it is determined by social conditions and reflects the rhythms of the group's social life (Sorokin 1964b: 171-172). Sociocultural time is most of all practical time with the main functions of creation of a reference system for sociocultural phenomena, organising a time system and reflecting and facilitating rhythms of the society's existence.

Even though Sorokin gives much attention to culturally different concepts of daily time flow as well as time reckoning and measurement, his attempt to describe the sociocultural time through three planes of time - *aeternitas*, *aevum* and *tempus* — could be considered conceptually central to his approach (Sorokin 1964b: 215-216). Deriving this division from the medieval philosophy of time (see e.g. Porro 2001), Sorokin (2000) links it with his own division of cultures into *ideational*, *idealistic* and *sensate* phases, thus transforming three planes of time from medieval primarily theological categories into sociological ones. While *tempus* includes the phenomena of movement, change, «flow of time» and reckoning and measuring it, *aeternitas* and *aevum* help to locate sociocultural phenomena that seem to be out of daily and empirical understanding of time — meanings, validities, etc. Thus, we can conclude following Sorokin that the sociocultural space locates and organises sociocultural objects statically — to enable the study of sociocultural change by comparing different states of the system —, the sociocultural time locates their dynamic aspect, change or being.

## 2. MODEL FOR THE CITY AND THE CITY AS A MODEL

Sorokin's discussion on sociocultural causality, space and time form a framework for his earlier theory of cyclical development. Some authors that have dwelt on cyclical social development

focus on the city as the utmost expression of development cycles, and even as an ideal model that is itself organising the society and its dynamics.

According to the model proposed by Lewis Mumford (1938; 1961) and also Oswald Spengler (1998), the city is essentially connected to time, but the relation of city to time is twofold. The city is created as an expression of the ideal model of the world of culture, as an expression of *Heavenly City* and remains connected to that ideal. However, the city is historical and history is created in cities. The city as a container includes artefacts from different times examining their comparison and re-use, thus giving rise to the concept of history. Time becomes visible in the city, interpreting the accumulating cues of time creates history and consciousness of past times. But by the origin of the city in the sanctuary and the city as a realisation of the ideal and utopia, representation of cosmos and heaven, the time of the city is partly sacred time, at least not passing the same way as profane everyday time. Thus, the city is both historical-temporal and a-historical (Donskis 1991; Mumford 1961).

Consequently, a common meaning attached to the monumentality of buildings that accompanies time and again the development of cities, is the a-historicity and a-temporality. This interpretation exemplifying a materialisation of temporal code has its counterpart in the idea of *temporality* that underlines (as a distinct process) the ongoing destruction and development in the city. In this line, the idea of temporality in the city is connected to the agglomeration of expressions of culture, the cultural artefacts that relate to each other in synchrony and in creating a kind of «memory». The origin of the concept of *time* as described by Emil Durkheim (1968) is supposed to arise from shared periodical activities in society and discourse about this. The *time* arising from social activities can be understood as *social time*. The *cultural time*, in its turn could then be claimed to appear in the process of relating oneself (as a cultural subject) to the accumulating material and mental environment in the cities. Relating the accumulation of artefacts and cultural generative processes Lotman (2000: 195) states accordingly: «The city is a mechanism, forever recreating its past, which then can be synchronically juxtaposed with the past». As Lotman's idea is connected to his textual models, this description of the city is not just the object-city, but involves the metalevel — descriptions and conceptualisations of the city, its culture, society and history.

If cultural artefacts tie the city to the cultural passage of time, then the cultural ideal, that the city follows and symbolises, creates the sacred time measure. The city having a *heavenly twin* and its relation to the city as a cultural ideal or the model-city has been conceived as a basic underlying concept of the city in cultures (see Eliade 1954; Mumford 1961). Such concepts of heavenly city could be found in various cultures, for example, the *Heavenly Jerusalem* or *the city of god* in Christian tradition, and its description in Revelation as most authoritative source, and also in Christian culture, more widely in folklore (see also: Augustine 1950; Swedenborg 1966).

The concept of the heavenly city can be a general structural model for any complex system (also for interpreting and creating urban space). However, its urban and spatial traits enforce the physical city and experiences of it to act as a model.

Even though the medieval praising of the city and its space, and the hierarchical evaluative systematisation of cities has numerous similarities with today's interpretations of cities, there are also major differences. For example, concepts like the *world cities* and the *hierarchy*

*of world cities* (Deruder *et al.* 2003; Hall 1966) are analogically using the concept of *city* as a dominant element in the world and applying a hierarchical structure — where the ground is not religious values, but economic values based on socioeconomic practices and interpretation of these in terms of universalistic «capital» in the general world model. While the basis has moved to socioeconomic realities, the model is lacking the holistic spatial integration. Thus, (on the conceptual level) the power of urban structure over the region in symbolic (see Lagopoulos 1993) and also in economic terms (as on the basis of traditional Southern-German settlement structure: Christaller 1933) has been exchanged for a hierarchical system of cities that are (spatially) conceptualised in a net of hierarchies that includes cities as discrete entities but without continuous space or modelled as central point of the continuous regional (whatever the extent) space. As the idea of heavenly twin has been forgotten, the organising ideal remains in a non-referential way inside the city itself. The religious system has been replaced by the socioeconomic while the structure of the models is persisting in great respect.

### 3. CITY AS A FIRM GROUND FOR SOCIAL CONCEPT OF TIME

In the context of the sacred dimension of the city, the *city* is an ambivalent ground for cultural time and history, combining the sacral a-temporality and, being the earthly counterpart, everyday temporality. The latter emphasises the social character of the city. Accordingly, Mumford claims that the essential and outstanding feature of the city is *drama*, especially *social drama* — that «comes into existence through the focusing and intensification of group activity» (Mumford 1938: 480). One such social drama that forms a basis for the emergence and development of cities is the market. Even if (contrary to economy centred views) it is not the decisive factor or the origin of cities, the market is a place for social and cultural communication, «the communication drama» so crucial for cities. However, the market is closely linked to the time reckoning and calendar, if not to the general concepts of time.

Markets play their role in physical spatio-temporal organisation of society and also in the conceptualisation of this social and environmental organisation. The internationalisation of society, and the market at the head of it, creates a need to universalise the system of measuring time and space. This includes making the understanding and usage of time and space more universal and objectified. Several important aspects of this objectified space and time have been described in the field of human geography. The objectification and universalisation is related to technological development, to new experiences and new conceptualisations of it. For example, the concept of time-space compressions or time-geography and the empirical grounds of geographical temporalities (Kern 2003; May, Thrift 2001; Pred 1981) is describing the technological development forcing change in the mentality at the object level, while this focus on technology engineers the metalevel also towards the descriptions of the objective or objectifying characters of space and time. This strengthens the need to be also aware of differentiated and separated local social time, places and value systems.

Even though the universalised space and time might seem to claim to be physical and non-semiotic, these concepts and practices have come up in certain states and types of development of society and culture and are already socioculturally organised systems (see also

Sorokin 1964b: 168, 170). Thus, in addition to organising the society, these concepts of time and space are also ingrained in the sociocultural environment, especially in practices, needs, and tools accompanying internationalisation of activities. When universal space and time are legitimised as the most normal time and space concepts, it becomes a neutral and seemingly not meaningful system — an empty background on which all other practical and theoretical concepts become significant (meaningful and highlighted).

#### 4. RHYTHMS AND PRACTICES IN THE CITY

In addition to cultural world models and objectified social structures and physical space the city also exists on the level of individual subjects and their everyday activities and practices. Concentrating on the individual in the city and their practices and trying to leave aside the cultural aspect, the city involves mainly two systems: the system of agents as social and physical beings and the system of objects, or vehicles. Both can be viewed either as semiotic or non-semiotic systems, as a system of positioning in physical space, not in the sociocultural. Thus, practices of everyday life can be described purely physically, e.g. in the case of walking as a practice, this describes a route for walking. But a line on a map tracing the movement of the body is a mere trace that denies the essence of the practice that creates it — namely the act of walking and involvement of the subject (de Certeau 1994). This sociocultural part of the practice is the part that creates urban space, allows the *rhetoric of walking* that de Certeau describes.

Physical actions, especially moving in space and the usage of space can be modelled in spatio-temporal «mapping». An important concept for the study of this temporal aspect is rhythms. Henri Lefebvre has proposed a specific study of the temporal aspect in urban environment by *rhythmanalysis* (Lefebvre 1997). The rhythms in the city include a long list of human social and personal actions, changes in environment, repeating objects, etc. In the context of this diversity rhythmanalysis can be defined as «a description of the contrapuntal rhythms that articulate an experience of the city» (Highmore 2005: 150).

The city and urban environment is specifically characterised by a huge diversity of rhythms. The multiplicity of rhythms and their study can be claimed to be of very general nature, a universal methodology for describing and analysing the nature of places and the temporality of urban places. In fact, this variety of human everyday practices, as well as other rhythms, has cases or parts that are purely physical and parts that have a special place in the sociocultural field. Thus, in the essay «Seen from the window» Henri Lefebvre (1997: 219-227) discusses rhythms as objectively observed — flows of cars and people on the street, changing patterns of colour, movements, sounds, filling of space, action or lack of it on the street, etc. Even though this observation conceptualises rhythms noticed (as traffic, behaviour of young people, autumn in the garden), it ignores the level of semiotisation that takes place in the observed world — it does not ask for the aims and meanings of people filling the street with rhythmic movement.

Defining the rhythms in the city and describing urban places by describing rhythms in these is about the «visible» spatialised and objectified evidence of time. According to Lefebvre and Catherine Régulier (Lefebvre, Régulier 2003: 194) the everyday life rhythms include three

main attributes: *repetition*, *movement* and *internal measure*. These attributes seemingly open a way for objective analysis (including registering and measuring) of the temporal being of urban places. But even if the characteristics of a rhythm exist physically, in order to be existent in the sociocultural universe (and thus actively involved in the urban life as such), the rhythm with its components needs to be recognised and related to the known sociocultural structures. As the rhythm is composed of the repetition of events (which in the case of spatial rhythm could be *objects being present*), the first need is to have the *event* itself — which is already a complex construction involving selective cognition, segmentation and memory.

To put it more generally, as far as we consider the city as a sociocultural phenomenon, for the rhythms to exist and matter as urban characteristics they need to be included in the wider field of sociocultural time, which is a part of the sociocultural universe. Although physical changes (like day and night, seasons, activity in time, etc) do exist as «rhythms» they start to carry significance for the city as a sociocultural system only when they are recognised and conceptualised and incorporated. The changes, not incorporated, do not create a meaningful rhythmic difference in the city. Thus also the observation of objectified rhythms does not lead directly to the understanding of the city, its society and culture.

Even if it is possible to trace the whole diversity of rhythms and their physical relations in the city, only rhythms that are recognised and positioned in the sociocultural universe define the temporal characteristics of urban space for the society and its culture. Following Lefebvre, the most valuable sight from rhythm-analysis is not the fact of rhythms existing, but relations of conceptual contradictions that arise from the conceptualisation of the place, city and the rhythms thereof. The nature of a city and urban places lies rather in choices of rhythms acknowledged and the way these are conceptualised — positioned in relation to each other and to chosen social and cultural fields.

## CONCLUSION

On a very general level two kinds of space could be distinguished in case of the city: the physical and the sociocultural space, with the latter also being objectified in physical space. Physical space in its turn is objective (or objectified) ground and the system for placement of self, others and describing the sociocultural world in general. This mutual exchange relationship is present already in social and cultural practices as object level; and as a further development also allows creating conflicting descriptions of spatiality of culture and society and sociocultural character of space on the meta-level.

In a cultural perspective, the concept of history and historical time can be found to have emerged in the city. Because of the centrality of this concept to the self-description and identity of culture, we could describe it as *cultural time* in comparison to *social time*. Spatially the city often functions as a centre and as an ideal model in culture. At the same time, this *city* is neither spatial nor temporal in direct physical sense. Each description applies the respective concepts of space and time to the city, thus it is not the problem of choosing one out of many (physical, cultural, social, metaphoric, symbolic, mythological, etc.) concepts of temporality and spatiality, but rather finding a connecting framework of sociocultural space and time.



A concept of time, characterised as objectified, rhythmic, measurable, and filled with events and such, could be associated to the respective concept of space that would be material, sensible space and the space as a container of social relations and objects. Although this «urban time» is near to Sorokin's concept of *sociocultural time*, especially in its *sensuous* version, the respective concept of space is far from Sorokin's *sociocultural space* that is instead an abstract system of relations and spatial via metaphor and projection of sociocultural categories onto space. The latter has more in common with the previously described cultural notion of city as an ideal model with its temporality and spatiality.

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