

THE NETWORK PARADIGM: FOUNDATIONS TOWARDS A RECONCEPTUALIZATION OF TERRITORY AND RE-SCALING OF FORMS OF TERRITORIAL ORGANIZATION

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INTRODUCTION

The process of globalisation is not new, however, the expanded and in-deep of modernity add new quantitative as well as qualitative features to the inhabited space. The theoretical and empirical debate over the nature of contemporary urban restructuring, although it has been approached from different themes – given the multifaceted and complex reality of the urban process – reflects a general tendency that runs through such studies in which the network is ever more considered to be a structure of organisational knowledge, of behaviour of society and of territorial development (Camagni and Salone, 1993; Castells, 1996; Boix, 2002; Meijers, 2007).

The network model affirms that territorial development result from a rationality and behaviour in the interaction of citizens, institutions and companies, both internal as well as external, to the with the whole of urban system. Three major questions have been debated concerning the understanding of territorial dynamics under the network paradigm: a) scale, form, evolution and types of interurban relations (variables, indicators and systems of measurement); b) mechanisms of construction of relations and use of the network (players); c) socioeconomic and spatial implications of the patterns of interurban relations (evaluation of the externalities of the network).

This article is based on the theoretical-interpretive reflection of the network paradigm and on the rescaling processes of urbanisation, production and regulation. This is a theme that to some extent has been present in the last decade but that needs a more accuracy organized system. Therefore, and in the first place, a review is made of the foundations of a

new epistemology of the globalisation linked to the paradigm and, as a consequence, of the recognition of a renewed ontology of man-environment relations in the processes of territorial development. In second place, we move toward an explanation of the interdependence between the process of urban territorial rescaling (territorial integration-interconnection at different scales) and of state rescaling (a new political-economic orchestration at different scales). In third place the role of emerging urban forms (polycentric urban region) is examined at the same time as are new strategic appearances resulting from and vehicle of the political-economic organisation of society.

THE EMERGENCE OF THE NETWORK PARADIGM AND A NEW CONCEPTUALISATION OF TERRITORY

The structure that supports the network paradigm can be traced in good measure to the debate over economy and territorial development formulated since the nineteen eighties (Camagni and Salone, 1993; Capello, 2000; Boix, 2003; Meijers, 2007b; Lambregts, 2009). Resulting from the above mentioned theoretical debate, a relational approach is established to the organisation and development of society suggesting the following manner of defining territory: territory in the network, territory as network and territory as a relational effect. Territory in the network is identified by the idea that cities or better said, human settlements are not isolated, but exist within a dynamic reality. The traditional theory of central place loses strength so much so that the growth and development of a settlement do not depend only on its size and its hierarchical and single direction relations but also on its multidirectional relations with settlements of different sizes. Territory as network is understood as a space of possibilities created by society and derived from this creation. Therefore, the territory is identified as the nexus (network) of the cultural, social, human and physical capital created, accumulated and perfected over time (Dicken and Malmerg, 2001). So territory is no longer to be understood as a mere stage or theatre of the processes of socioeconomic development, but as source and source of development. Territory as relational effect implies the idea of construction, of social product that conditions not only the process in a local space but also has effect on the development of society. This third feature is connected with the capacity of contingency of socio-spatial organisation at different scales.

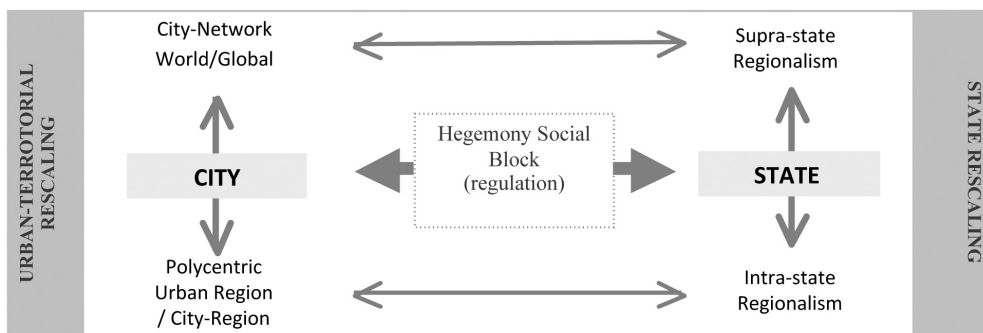
THE PROCESS OF CAPITALIST RESTRUCTURING: URBAN-TERRITORIAL AND STATE RESCALING

We live in an urban world, not only because there are more people in spaces considered to be cities but also because the process of urbanisation is spread throughout the world (UN-HABITAT, 2008). Every human settlement is connected to other settlements, by material or non-material means, supported by infrastructures such as roads, railways, sea routes, airlines and more and more telecommunications as well as by various agreements among public-private players; this process is known as urban-territorial rescaling. At the same time, we live in a regional world (Scott et al., 2001) in the sense that the Nation-States are no longer the only space that regulates economic policy. New scales with political-economic power take on more importance; this process has been termed state rescaling (Brenner, 1999; 2009).

The analysis of the process of urban-territorial rescaling is based on the studies of restructuring of the productive system and the interpretation and analysis of companies, cities, regions and nation-states as spaces of production, consumption and movement of goods, technologies, knowledge, persons, capital and information.

The rescaling of the Nation-State is founded on the formation of new scales of political-economic power, from above and below, of the Nation-State. This process assumes the transition toward a new rationality of territorial policy, incorporating the development of public-private agreements and its participation at different scales, a phenomenon described as the shift from government to governance.

Figure 1
RECONFIGURATION OF GEOGRAPHY OF CAPITALISM



Fuente: Own elaboration

RELATIONS BETWEEN THE URBAN-STATE RESCALING AND THE MOSAIC OF REGIONAL ECONOMIES

The urban territorial and state rescaling are two processes that are developed in parallel to the course of the current capitalist phase. In spite of this point, the explication of their interrelation is little systematised as much on the theoretical as on the empirical level. Based on three types of reasoning, which begin to converge in the nineteen nineties, the interlacing of the reconfiguration of the rise of capitalism appears.

Firstly, since the beginning of the twentieth century it has been seen that the city was the point of confluence of international economic relations (Saefler, 1913; in Perulli, 1995:23), however, it would be in the seventies, in a context of change when authors such as Harvey, Castells and Wallerstein establish a relation between urban development and change on a global scale. Later at the start of the decade of the nineties, King (1990), based on numerous examples of said relation, with origins in the hypotheses of the «world city» of Friedman and Wolf (1982), pointed out that we were facing the greatest change in model in recent urban studies (in Taylor and Flint, 2002). Since its initial appearance, the world city has been studied based on nodes or points of global capital, typified by hierarchical type. In the second half of the nineteen nineties, the world, far from being conceived under the trio (New York,

London and Tokyo) shifts to being seen as a global network of cities which functions as a set of strategic sites for global operation, in the words of Taylor (2007), a «world city-network or systems of interrelated world networks».

Secondly, in the hypothesis of world city, presented by Friedman and Wolf (1982) and previously in Peter Hall's *World Cities* (1965), the regional scale of these places was recognised, but it was not until more recent years that the interrelation of globalisation and the constant growth of urban regions was observed (Scott 1988; Castells, 1995; Scott et al., 2001; Scott and Storper, 2003; Soja, 2005; Mussil, 2007; Sassen, 2007). The emerging urban-regional systems of polycentric type begin to be interpreted as i) basins of life, dense networks of material and immaterial flows within and between spaces of residence, production, leisure, consumption and study, supported by transportation and communication; ii) areas of socio-spatial conflict where multiple interest, different cultures and identities appear; iii) political-economic units with increasing autonomy for action on different scales.

Thirdly, the proliferations of new scales of power orchestrated by Nation-State, supranational regionalism and intranational regionalism, is the consequence and favour the interconnected network of global urban regions. Regionalism is linked to the need for a new co-ordination in the circuits of production, circulation and consumption at different scales. On an intra-scale, the new regionalism is developing around four major tendencies: a) the existence of historically accumulated resources must be understood as a common source in order to finance projects of infrastructures and equipment according to spatial vocations; b) urbanisation on the regional scale has led to increasing urban and urban-rural interdependence, a point which should be taken into consideration in order to define strategies of co-operation and co-ordination; c) socio-economic processes of dissemination require a joint planning within and between urban regions; d) economic, social and environmental inequalities must be corrected within the framework of proposals of spatial planning.

POLYCENTRISM AND TERRITORIAL DEVELOPMENT: A NEW AGENDA FOR THOUGHT AND ACTION

The idea of expansion-construction of regional economies is associated with the relation between the accumulations of capital, urbanisation and state regulation. Capital is inherently oriented toward an elimination of spatial obstacles in order to favour its circulation (Lefebvre, 1974; Harvey, 1985). The elimination of spatial obstacles is based on the territorial configuration/urbanisation and its corresponding temporary dimension, a process which is carried out through state regulation. At the present time the major territorial configurations are no longer centred on an urban system of monocentric hierarchic type but on polycentric urban-regional dynamics. From this viewpoint we can observe two tendencies. The first is the polycentric urban region as a socio-spatial reality in expansion. In effect we are witnessing an emerging mosaic of polynuclear regional economies which are more and more interconnected internally and externally. This makes for an expression of economic growth and selective innovation at the same time as it is a stage for social inequalities and negative environmental effects. The second is the polycentric urban region as ad hoc construction. The idea of polycentrism is played out as political and planning strategy toward the construction

of a new, more competitive, and sustainable and balanced territorial model (ETE, 1999; CESE, 2004; 2007; European Territorial Agenda, 2007).

- *Interpretations of polycentrism.* A double interpretation is presented, one analytical and the other strategic. The analytical approach consists in an examination of «spontaneous» territorial dynamics. It is characterised by the coalescence of consumption, leisure, housing and job markets, etc. on the polycentric territorial configuration. The strategic approach links the notion of polycentrism to the surpassing of a hierarchical scheme and an entity, the Nation-State, of political-economic organisation, giving way to a new organisation and functioning in the network of different public and private players and at different scales.
- *Moving toward a research plan on the urban polycentric region.* Here three major themes are discussed. The first justifies the need to substitute the concept of metropolitan area (still used in legislation and in vocabulary of scientists and planners) with the term polycentric urban region. The second presents major axes of work for an agenda of research on the polycentric urban region: a) change in scale of urban region (re-stretch); b) change in structure of the territory (re-shaping); c) change in articulation of the territory (new spatial relations); d) change in the functioning of the territory (specialization-complementarities); e) change in form of government (from government to governance). The third theme is linked with the idea of strategic vision of the polycentric urban region oriented to action.

CONCLUSION

The processes of production, urbanisation and regulation in operation need new forms of interpretation of reality. Since the nineteen eighties there has been a build up of a new model for the understanding of territory and the explanation of its dynamics. This interpretive scheme has been termed as network paradigm, or the wider term, network territory paradigm. The aforementioned paradigm causes a relational examination of the territory and it is to be understood as three dimensional: 1) territory as a network of cultural, social, political and economic factors; 2) territory in a network of relations with different functions in relation to the rest; 3) territory as result of networks of diverse interests at different scales. Based on this interpretation we move, on the one hand, toward the construction of a new architecture of knowledge of territory and society and, on the other, toward the configuration of new territories of development.

From the theoretical point of view the network model proposes a frame of interpretation and a descriptive platform as well as knowledge oriented to action. The idea of network is understood as an organising tool, which permits a better approach to the logic of the market as well as to the logic of the State. From this aspect, a structural frame is formed around the explanation of two complementary processes: the urban-territorial rescaling and the state rescaling, in the logic of the new model of relations within the processes of production, urbanisation and regulation.

From the operative point of view the network paradigm contributes to the creation of new areas of development. Based on the relational conception of territory the notion of polycentrism is furthered: 1) as a guide toward the territorialisation of agreements and

obligations of public as well as private agents; 2) as a formula for complementing and for contiguous exploitation of resources –economic, human, environmental, institutional and cultural– that exist in each territory.