Virtual or real megaregions?

The case of Linear Metropolitan System in Northern Italy

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Introduction*

Nowadays we are witnesses of a frenetic and chaotic development of contemporary cities. After the rising of metropolis (with the industrial revolution), the strong economic pulse during last decades caused the rising of new urban entities, at first called megalopolis [1], now called megaregions [2]. These new entities are formed by two typologies of land: a polycentric system of metropolis and cities with high-anthropogenic-pressure levels, where buildings (residential, industrial, commercial) are distributed along traffic corridors and form an urban continuum; a supporting ecological region with low-anthropogenic-pressure levels. These two typologies are both parts of the same system (the megaregion): if one exists the other one should exist as the counterpart that could maintain the system balanced, primarily from the ecological point of view.
Dealing with these new forms of city, two main themes suggest a profound reconsidering of city and territorial planning. Firstly, urban development implies a disconnection between the urban shape (the real city) and the municipal boundaries (the virtual city). The loss of identity between real and virtual cities occurred with the rise of the industrial city where urban development started going beyond administrative boundaries, and in some cases new administrative boundaries are instituted, the metropolis (i.e. London or Paris in Europe). With the rising of megaregions, urban development involves not only municipal boundaries but also regional (and sometimes national) boundaries, making more difficult to deal with planning and managing such a complex system.
Secondly, the issue of a more sustainable development is becoming more and more significant for developed countries (i.e. Europe and U.S.A.), which aim is to promote a better economic and social growth. As a matter of fact, both "America 2050" and "Europe 2020" are commitments for a sustainable growth, but, whether U.S.A. planning derives from partecipative actions, European planning often

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generates actions not dealing with megaregional systems policy [3]. This occurs because there is a lack of consciousness of city dimension at a European level: in some cases cities are part of the territory and in some other they are "the territory" at a whole. At a national level, the absence of a process of governance (i.e. specific authorities, policies) to deal with these aspects causes a lack of systematisation of the problems and the proposals of weak solutions. Since megaregions, and generally speaking the contemporary city, change the relationship between city and countryside, administrators should deal with sustainable approach at a local level in coherence with supra-regional planning policies. This means reading in a contemporary key (i.e. renew) the relational system between the city (high-human-pressure areas, metropolis aligned along the kinematic band) and the countryside (low-human-pressure areas, ecological areas) recognizing the places where this relational system occurs.
Looking to countryside, in most of the cases, means to refer to the areas just outside the cities. Such high valuable landscape is recognised by the society as the place of loisir and is traditionally strictly linked to the city itself. This is important in order to make low-anthropogenic-pressure areas play a complementary role towards sustainable development of the megaregional system. Considering megaregions as the result of the interaction of two complementary anthropogenic-pressure areas means developing planning actions and policies which aim is the valorisation of this complementarity. Low-anthropogenic-pressure is intended as an identarian value and as an opportunity for those areas charachterised by those values.

The Italian case study

Plenty of studies [4, 5, 6] investigate on metropolitan phenomena from the point of view of the economic relationships, referring to virtual macro/mega-region. The aim of this paper is to deepen the actual, nontrivial and recent phenomena that take place not only in the emerging countries but also in Europe (and in other developed countries such as U.S.A.) where the complex stratification of the phenomena makes difficult to comprehend megaregion dynamics.
2007 Prin research "From metropolitan city to metropolitan corridor: the case study of the Po Valley corridor" highlights the urban and territorial phenomena in Northern Italy. The research presents the prevalent characteristics of those territories in which mega-metropolitan systems occurs. In detail, the alignment of cities and metropolis, such as Tourin and Milan, along one mobility directrix forms one linear metropolitan area called LiMeS (Linear Metropolitan System). This urban area stands at the limit of two macro-areas constituted by specific environmental systems, different one from each other from morphological, environmental and landscape point of view. The polycentric LiMeS stands, in the Po Valley case study, along the foothill line, at the limit between the Alpine macro-area, and the Po Valley plain. This statement confutes the previous hypothesis that urban and territorial phenomena take place mainly close to relevant traffic corridors: transport corridors alone cannot generate cities!
Po Valley LiMeS is a more complex phenomenon: gradually along the centuries, historical and geological conditions determined the concentration of the greatest

demographic developments round the cities, aligned along the dry plain band that coincide with the historical kinematic band. This justifies how Po Valley LiMeS is not necessarily identified with the prevailing highway and railway corridor, which nowadays coincides with the V European Corridor (Lisbon-Kiev). The settlement trends of the historical cities, as a matter of fact, depended on the healthiness of places, and consequently cities were placed on dry-plains areas (foothills, little promontories, etc.). This evidence explains why in some cases there is a lack of coincidence between the LiMeS and the kinematic band (placed recently in lowlands area after drainage processes). This fundamental aspect is sometimes undervalued, i.e. in the first European infrastructural planning (TEN-T) and also in the new proposals for the European infrastructural planning [7].

In more detail, Po Valley LiMeS is one of the biggest settlement and manufacturing systems in Europe (20 millions inhabitants aligned along 500km). Three of its attractive poles developed into metropolitan areas with different characteristics: the Turin monocentric metropolis, the Milan polycentric metropolis and the Veneto/Friuli-Venezia-Giulia diffuse metropolis [8]. Po Valley LiMeS is an area with high levels of human and manufacturing pressure whose characteristics are deeply different from those of the macro-areas that constitute Neighbouring Mega-Ecological Systems (NeMESys), characterised by low levels of human pressure (pre-Alps and Po Valley wet plain).

To study the articulated situation of Italian LiMeS and NeMESys, a mega-regional system that clearly insists on municipal and regional borders of Northern Italy, it has been necessary to analyse the phenomenon in its complexity, with a supra-regional approach. This meant building a knowledge basis structured on national and European datasets, i.e. Corine Land Cover project that maps European land cover, using also tools like GIS (Geographic Information System). The analysis deriving makes evidence that we are in front of a linear metropolitan system phenomenon that is the skeleton of the Megaregion and is more complex than TEN-T Corridor V: cities insist on it with deep macro/micro relationships with the countryside. The construction of knowledge basis with national and European datasets is fundamental also for the establishing of comparisons between megaregions around the world.

In U.S.A., Regional Plan Association (RPA) is investigating, with a proactive behaviour, the relations between high-speed rail development versus urban areas. In particular we focused our attention on the North-East Megaregion that develops between Boston and Washington (incorporating New York, Baltimore and Philadelphia). Comparing Po Valley LiMeS and North-East Megaregion makes evidence of the importance of governance in such realities, which could insist on different administrative structures. A supra-regional policy starting from effective megaregions know-how could suggest innovative solutions and processes.

This Prin 2007 research could be the first approach towards European megaregions that, rather than considering those economical aspects that can be partially consolidated, wants to get over those European Cohesion Policies. [9]

Conclusion

Stressing out the problems of the Northern Italian territory the paper will deal with the possibility to apply the Northeast megaregion planning methodology to the Po Valley megaregion.

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