The process of infrastructure building: Between construction and use of resources

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"Cecilia": the changeable city

There is a literary image which reflects quite effectively the various difficulties that may be encountered in understanding and properly interpreting the impact of the human activities on the territory. This image is what Italo Calvino called the many *invisible cities*. Among the various cities described by Calvino, one seems to express, better than the others, the highly dynamic, and at the same time fragile, character of the presence and impact of man on the environment. The *'continuous city'*, the city *'too big [...], uniform, which is gradually covering the world'*, becomes dominant and acts as a background to the interweaving narrative. One of the main "continuous cities" described by Calvino is Cecilia. Here the author writes an imaginary dialogue between Marco Polo and Kublai Khan, the emperor of the Tartars: *'You reproach me - says the first - because each of my stories takes you to the middle of a city, without telling you about the space existing between one city and another'*. So Marco Polo tells the emperor Kublai Khan about Cecilia, *'the illustrious city'*, where he had met a shepherd, lost in the maze of the city along with his flock. He had asked for some information about the place, *'Bear with me',* the shepherd said to Marco Polo, *'I am a herdsman. Sometimes the goats and myself have to pass through cities; but we cannot tell them apart. Ask me the name of the*

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pastures: I know them all [...]. But the cities do not have a name for me: they are places without leaves, which separate a pasture from the other'.

A few years later the two met again. This time it was Marco Polo who had lost his way after having walked for a long time through the suburbs of a city. When the traveller learned from the shepherd that he was in Cecilia, surprised, he exclaimed: '*This cannot be true [...] I entered a town and since then I have continued to go through its streets. But how did I get to where you say, if I was in another city, far away from Cecilia, and I've not even come out yet?'* (Calvino, 2009, pp.152-153). The places were mixed, Cecilia was now everywhere. The experiences of Marco Polo and the shepherd provide a representation of the processes of growth and, at the same time, of dissolution of the city

Calvino's story introduces us to the core of this conference. The goal is to develop tools with which to read and interpret the shapes of the settlements, the transformation of the city, the powers, the levels of jurisdiction, the social practices, the resistance, conflicts, identities and symbols that are stratified in the structured and very complex notion of territory. This was defined, not merely by chance, a few years ago, as a '*tangible deposit of the processes of transformation*' and, at the same time, as an '*object of the transformations*' (Bellicini, 1990).

Furthermore, the territory, in its social, physical and natural meaning, upon which the complex action of man is exercised, must be governed. Therefore, the need for a government of the territory, appeals to experts and scholars to question and study the dynamic and mobile nature of settlements (Campione, 2012), the pervasive form of the city, its impact on the natural environment, on the dissipative use and consumption of resources, on the problem of energy supply and on the strategies that historically have been devised to face it. Moreover, it will

also be crucial to analyse the need to preserve available resources, enabling policies for their protection, conservation and regeneration in order to contribute to the upkeep of vital societal functions and the welfare of the community.

The redefinition of urban boundaries

However the investigation into the territory cannot start without an awareness of   economic, cultural and technological change. It was induced primarily by the techniques of mobility and communication, affecting basic categories of human experience such as those of *space* and *time*. Speed was the key to understanding the 19th century and the first decades of the 20th, characterised by the development of transport systems and the connecting of places through railways, tramways, steamships and mass motorisation.

In the post-WWII era everything changes and new categories appear in order to support the understanding of the contemporary world. The enormous potential of current society in terms of the mobility of people, tangible and intangible assets, the elimination of the distances hitherto imposed by geography and the role of telecommunications help to define the dimension of the post-modern society, based on the experience of everyday life and dominated by the categories of *ubiquity* and *instantaneity* (Virilio, 1998).

From the second half of the 20th century, the city, defined by Secchi (2005, p.15) as a '*concentration of activities and population in competition with each other for the occupation of a space limited by the techniques of mobility*', produces a two-fold sense of anxiety. On the one hand, the awareness of a relentless growth of the city and on the other the perception of its

dissolution in sublime forms of settlement, whose role and functions are difficult to understand. Underlying these processes are phenomena such as having gone beyond a Fordist organisation of work and the decentralisation of production.

A transition to a post-industrial society also implies a shift from production to consumption. In 2007, Massimo Ilardi precisely explained the use and the dissipation of urban and rural space that abolishes the traditional dichotomy between town and country, previously justified by the diversity and complementarity of production regimes. He states, '*Since the link between urbanisation and industrialisation was over, urban sprawl, without the powerful engines of export manufacturing, is no longer linked to economic development but is due to social factors related to consumption*' (Ilardi, 2007, p.56). Likewise, it is with difficulty that the dynamics of social action are contained within the borders of the city, overflowing into the interstitial spaces of urbanism, that is to say those of the countryside that are increasingly subjected to a powerful process of redefinition of their functions (Bevilacqua, 2001). In addition, the mobility of a multitude of individuals, protagonists and interests leads to the subjugation of places and of objects and cultural institutions, which are thus destroyed or ascribed new meaning. The result is the constant emergence and decline of parts of a city, as well as the establishment, dispersion and migration of the functions performed by various sections of the territory. What is now highlighted are the *non-places*, as explained by Marc Augé (2009), '*le terrain vacue*', urban areas without a role and the formation of new parts of the city. From this powerful process of redefinition of the territory, the crucial issue of sustainable consumption of natural resources and of the maintenance of the biological functions of the environment emerges (Corona and Neri Serneri, 2007).

Urban systems, and contemporary ones in particular, have triggered profound *metabolic* processes to attract large flows of people, goods and energy, incorporating in their production cycles a significant share of the surrounding environment, of the countryside and of the landscape. In this way, the changes brought about by the city have led, with extraordinary acceleration, to a constant redefinition of the boundaries between the interior and exterior of the urban dimension. Furthermore, these metabolic processes of the city have increased the fragile and exalted nature of its borders, which became more uncertain, volatile, and unintelligible (Campione, 2012). As a result, we see the metropolitan city, the city network, the fragmentation of human presence, the computable city, the virtual city in which '*the intangible flows of goods, people and ideas*' flow and become the primary feature of the post-Fordist urban centre. Cecchini (2012) defines the city as '*a space that is real and, at the same time, virtual, really virtual and virtually real*'.

The long process of construction of the modern city has an impact on the mechanisms of reproduction of the ecosystems (Pasimeni et al., 2012), together with the different ways in which social systems have historically made use of natural resources (Denitto, 2012). If the *Fordist* city were responsible for the alteration of resources, such as air and water, owing to air pollution and the poor effectiveness of waste disposal systems, the new urban sprawl would seem to threaten the *soil* directly. The phenomena of dispersion of the city and of human activities on the territory show processes of irreversible *consumption* of this soil and of the landscape. Not surprisingly, in regulatory terms, the issue was addressed by the European Commission, in September 2006, which developed its own *Thematic Strategy for Soil Protection,* together with a proposal for a Framework Directive (European Commission, 2006).

How to reinterpret the historical city

The analysis of the complex social and cultural interactions in progress within the urban *sprawl* leads to the identification of methodologies and categories for the interpretation of the processes of urbanisation and construction of the territory that must be placed at the centre of any process of renewal. The same transformations that affect the city must be understood '*as a signal of a critical mass, clue of a forthcoming cataclysm disintegrating the historic city, the traditional urbanisation, and the same form of the state*' (Virilio, 1998). In addition, artificial construction of the territory (Gambi, 1972), consumption of places, and consumption of resources are complex processes. For the analysis of such processes it is necessary to identify those interests that are able to produce these transformations. The difficulty of interpreting these interests has led to a crisis in the statutes and hence government policy.

A concrete example is the precipitous drop in social consensus for the construction of infrastructures, powerful vectors for the transformation of nature. Roads, bridges and railways that have traditionally assumed a projective role in the urbanisation of the surrounding space. Furthermore, energy and water infrastructures can be interpreted from the dual perspective of transformation of the natural environment and transformation of the technologies, jurisdictions and conflicts influencing them.

Moreover, towards the end of the 1980s, the same planners questioned and/or rethought the concepts of function, density and infrastructure. They argued that the concept of function no longer restored to the territory '*an image of its actual functioning*', i.e., the density, which had been at the basis of modern urbanism. In the contemporary territory, this was made of '*high and rarefied densities*' and nullified the

distances between spaces and people and also between people. The infrastructure absorbed the territory and the landscape. It was argued, in fact, that '*the infrastructure was the territory*'. It was thus a matter of '*returning to the infrastructure the impetus of change*''', where the relationship to the behaviour of social groups became a precondition in designing, planning and governing the territory.

Bernardo Secchi, discussing the concepts of *space* and *time* in planning, wrote that '*the changes of the land, and of the city, do not appear to be related to laws of motion of society, economy, or territory, understood in the sense of natural laws. Nor do they seem to be related anymore to large dominant patterns, projects driven by people with a certain power and, in any case, a clear identity, but they seem rather linked to a dark crowd of social protagonists whose identity is constantly changing, moving within a multiform logic*' (Secchi, 1987, p.173). Thus, the developmental character of *time*, involving social protagonists at every evolutionary activity of space, corresponds to the definition of infrastructures as territorial and social dimensions, as a place of social relations, such as the '*opportunity to restructure the territory, to mobilise local actors and to stimulate shared action*' (Pucci, 2004, pp.128-129).

These issues have become extremely relevant in public discourse. Significant evidence is provided by the importance assumed, at European Union level, by the social dimension of infrastructures. The European Council Directive No. 114 (2008) on *European Critical Infrastructure*, highlights the role of these works '*for the maintenance of vital societal functions, health, safety and social and economic prosperity of citizens*' and the potential impact of their damage. The need to establish a general framework for the activities of critical infrastructure protection at European Union level denotes the potential conflicts that could characterise these processes.

Critical infrastructures for energy, water and transport are complex and interrelated. This complexity derives not only from the technological factors that characterise these operations, but especially from the decision-making process and the procedure of public policy-making. In the past, we have seen the presence of single decision-making centres, related to both ordinary and extraordinary intervention by the state (the para-state entities, the Cassa per il Mezzogiorno), which started the unification processes of construction of the territory. Since the 1970s (Romano, 2012), the picture becomes more intricate, due to the fragmenting of state powers at different internal levels of governance (ministries, regions, provinces, municipalities, associations of municipalities, metropolitan cities, areas and planning for large areas), driven by European Union policies. The breakdown in public intervention at various levels of administrative decentralisation and, conversely, the presence of European governance, dilutes the unified image of the state and its own ability to produce consistent representations of the territory. To further complicate the picture, supranational and financial networks of power appear, which '*pass through the space, but do not cover nor close it*' (Hadjimichalis and Hudson, 2004, p.76). Consequently, a deep tension emerges between global and local dimensions, and between networks of economic power and territories. As a consequence of this conflict the critical nature of infrastructure building emerges, as well as the need for its protection, as evidenced by the European Council Directive.

Hence *governance*, *conflict* and *protection* seem to be the categories needed with which to analyse the social-political and institutional dimensions of territories. In the construction of an infrastructure, the periphery and the local authorities pursue strategies that always differ, in order to attract or repel the initiatives and the inputs from

the various *centres* (European Union, national and regional) and economic protagonists, such as the case of the high speed train in Italy, or, to remain closer to the context of Apulia, State Road 275, or the processes of energy infrastructures from fossil fuels and renewable sources of energy. With increasing frequency, we see a direct intervention in the decision-making process by different protagonists, often organised in civic and ecological movements, which can in turn generate opposition, and different territorial practices or alternatives. In all of these cases the relationship between infrastructure building and resource consumption becomes central (Occhilupo et al., 2011).

Herbert J. Gans states, *'different social classes, different ethnic groups and groups of interests living in the cities (or in a given area) have different ideas about how the city should grow and change, and which aspects of urban development should be encouraged by public policy, and who should benefit from the policy decisions of distribution. Consequently, these groups have all attempted, directly or indirectly, to influence ends, means and techniques of planning, and also the role of planners. [...] Who plans? And, with which goals and means? For which interest groups?'* (Gans, 1984, p.95).

The study, therefore, of a complex object such as the *territory*, requires making an effort to reconstruct a *relationship of exchange* and of the multiple links between the social dimension and the natural. In the study and analysis of the territory, one must look at nature as a collaborator in production processes; one must bring it into the dimension of *'essential subject and protagonist, an essential counterpart of social activity'* (Bevilacqua, 1996, p.9) and of good governance of the territory.

My personal view is that this conference, in undertaking a complex yet intriguing approach to historical research, will provide the first responses to the many questions posed

when we planned the course to be followed through the thematic sections indicated in the programme.

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