THE GREEN SYSTEM AND THE RETICULAR APPROACH IN THE ITALIAN PLANNING INSTRUMENTS

Filippo Schilleci [1], Annalisa Giampino[2], Francesca Lotta[3]

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Abstract

During the last decades, the importance of Urban Planning's role to safeguard green areas and to build green chains gradually increased. The latter played not only an ecological function to requalification the city's environment quality, but it becomes also an occasion to find social space.

In particular the approach changed, from a quantitative to a qualitative point of view. The first procedure reaches to achieve a minimum standard while the second one aims to satisfy ecological and environmental necessities.

The overcoming of a wrong punctual approach and the use of a new reticular one has origins in territorial scope where the new model is used to maintain and improve the ecological network. The latter encourages the ecological exchanges within different natural areas, which in this way, are not converted to island, avoiding a massive loss of species, both plant and animal (Bennett, 1991; Forman, 1995; Jongman, Pungetti 2004).

The transposition of the ecological network into an urban dimension led to the green chain beginning. This new model is not completely implemented by regulations even if often it has been part of the urban planning practices (Angrilli, 2002; Peraboni, 2010).

In the present proposal paper a dissertation about the different approaches to the green chain is proposed.

Indeed the instrumentation of Italian local planning has undergone transformations in the form and the substance: from the structure of Master Plan (PRG), planning instrument legislated by LUN 1550/42, to a new form plan carried out in Municipal Structural Plan (PSC), Urban Building Regulations

[1] Università degli Studi di Palermo, Dipartimento di Architettura, Palermo, Italia, filippo.schilleci@unipa.it
[2] Università degli Studi di Palermo, Dipartimento di Architettura, Palermo, Italia, annalisa.giampino@unipa.it
[3] Università degli Studi di Palermo, Dipartimento di Architettura, Palermo, Italia, francescalotta@gmail.com

(RUE) and Municipal Operative Plan (POC) and legislated by innovative laws of regional planning

1. The urban green spaces in new Italian urban planning

Pondering on the planning system innovation and its implications as to the systemic and reticular topic of the green on local scale, just means to give an account of the evolutive way/path of the discipline in relation to the territory governance and to the "re-founding role" exerted on it by the growning debate developed around the environmental matrix themes (Gambino, 1997; Filpa, Talia, 2009). If today we're able to consider, as an acquired cultural fact, the centrality of the theme as regards urban spaces and green areas planning, yet we have not to forget the difficulty of bringing this sort of consciousness into the logics and techniques of the piano. Moreover the asymmetry between theoretical conquests and operative applications represents a peculiar feature about the history of the discipline, characterized by a chronic slowness in relation to the technical and cultural evolution of the plan. Effectively, the urban planning, that nowadays succeeds in dealing with the theme of urban green, as a new and further projection plans, still represents an exception to the rule.

On the other hand, making the environmental problems as to an attraction within the urban plan has been the outcome of a gradual process of disciplinary and legislative reformation whose matrixes have to be found in that system of laws and planning practices grown between the Sixties and the Seventies. It is a matter of pioneer experiences, to which the current discipline of territory governance is indebted, that -by the identification of the complex social, productive and environmental component of the extra/suburban area- have subtracted the agricultural areas to the logics of property management, which identify them as places-limbo waiting for future construction (Campos Venuti, 1994; Oliva, 1995).

Reformist plans, after they had metabolized the systemic approach to the second generation urbanism, they promoted, in fact, new urban and environmental politics, stimulating a progressive evolution of relations between ecology and urbanism, seeking operational tools to reconcile ecological protection with development and recovery policies.

In the late Sixties, we're witnesses to a ferment of national legislation which will mark a new approach and a new attention for the extra/suburban areas, attempting to give them back at least that productive role denied by the previous plans. These are the years of the gradual reform of urbanism, where is trying to regulate, on national level, the dramatic use of land. In this case, both approvals of the L.n. 765/67, c.d. legge ponte, and the D.I. 1444/68 mark an important step in the protection of agricultural areas for many reasons: a limit of construction activity, in the absence of fundamental instruments of planning, is imposed; planning practice is spread; the extent required density for the private construction is determined. However, apart from a few exceptions, use plans were unable of being carrier of innovation introduced by such laws, simply classifying the

agricultural areas as E zone uncritically and generalizing constraints and indexes land. In many cases it's also happened that some plans would anticipate the reform laws in a fruitful exchange between practice and theory (Campos Venuti, 1991). It's so clear, for example, how the Reggio Emilia's Master Plan of 1967 provides a model for the articulation of the agricultural areas in three zones, defined on the basis of specific characteristics, productive and environmental, which represents nowadays a lesson in method difficult to overcome. It's in the path traced by this experience that, between 1989 and 1991, in the same town of Reggio Emilia, a "Preliminary urban-ecological Draft Plan" (Reu) takes place although it doesn't seem like a prescriptive instrument but a preparatory study in drafting the report on MASTER PLAN, fixing some basic elements about the territory governance and the plan forms derived from it.

Reu, in fact, establishes the final recognition of the necessary integration between urban planning and environmental planning; it emphasizes the importance of local scale, discussing crucial questions and environmental issues up to now treated on wide scale; it encodes a multidisciplinary system of analysis able to seize the environmental dimension in its own dimension quali-quantitative; it's about the green issue not only in terms of protecting but specially with regard a planning profile.

For more than a decade, these themes have been identifing the stakes for the re-definiton of the relation between towns, environment and pianos with regard the recent laws governing local territories according to the new forms of piano introduced by them.

Rather than going into the merit of the controversy about what has to be intended citing "territory governance" as a comprehensive term, seeing as a substantial problem and not purely nominalistic, there are certain details also ought to be mentioned becuse they mark a new period of the italian practice in urban studies which, gained the awareness about the role of green areas, has focused its reforming vis on the plan as to an instrument, on its form, on its contents and techniques. In these years of heated debates and experimenting, a reform of the local urban planning has now occurred, in its two distinctive components: the structural and the operational one. Regarding with the theme of urban green, the new model of the plan permits to think, in its programatic and structural dimension, a frame of sense around a project for the green areas, shared and not-negotiable. As Federico Oliva says (2008, p.5):

«A really structural form of the general plan is essential to ensure an effective and efficient Governance of the Territory, because within the general strategy that it expresses, it will be possible maximising the tools to use: from the regulatory plans for the existing to the negotiating programs for the trasformations, from the urban policies to the infrastructure projects, from the architecture project for urban quality to an environmental one, for the construction of an ecological network, in a crucial mix of planning, projecting and governance, for which,

sooner or later, we will have to confront a fair italian translation to the term planning».

Within the new instrument, it seems to be possible focusing the action towards a territory project able to realize a connection system between free urban zones and extra/suburban open spaces in order to contain the urban pression and to identify the integration medium between settlement development and natural values and agri-productive conservation. It's a commitment with a dual functional value: ecological, because creating a system around the areas of naturalistic interest permits the natural biological exchange; anthropization, because it strengthens the fruition system of such areas for social and recreational purposes.

Thanks to the case studies of Reggio Emilia and Ferrara we're trying to confirm what we have been explaining teorically up to now, focusing the evolution of the local plan as to the theme of urban green areas. It's an erratic course but, as both cases are demonstrating, costantly changing.

2. The evolution of urban green spaces in the plans of Reggio Emilia and Ferrara.

The selected case of studies – Reggio Emilia as to the instruments of planning (1999) and Ferrara as to the Municipal Structural Plan (2009) - are two emblematic examples to understand the evolution of the systemic approach and, subsequently, of the reticular approach of urban green areas.

The two examples, concerning the first one as the evolution of the other, from an historical to a substancial point of view, make reference to the Regione Emilia Romagna that always, in Italy, improve the structural reform of the urban planning.

Since the early Seventies (70's), thanks to Ian McHarg and Nan Fairbrother, the new ideas for a strategic landscape planning have been growing in order to deliver multiple functions and for enhancing the peri-urban environment and the beginning of the green infrastructure approach.

In the urban planning, the environmental issue becomes an important and central theme and the result is a rethinking of the relationship and interface between development – environment, that thrown in crisis growth patterns followed until now.

The plan of Reggio Emilia, which is part of the third generation's current of the Italian planning, expounds the transition from a culture of expansion to a model of trasformations. The plan of Ferrara, instead, has been consolidating not only the policies for the existing recovery, but also it has been trying to connect, like a network, those areas saved from transformative choices and gives them new social meanings.

The situation of Reggio Emilia, before the new plan, was primarily characterized by an high volumetry introduced by the plan, since 1985, and by the location of such projects, which would saturated and compromise possible green areas of which the plan was lacking.

However, the new instrument of 1999, signed by Campos Venuti, was an opportunity to define and refine, for the first time in the Italy, the change to the rebalance of excess volumes and to the recovery of green areas

A practical plan with a few principles and with simple rules aimed not only to guarantee equality of treatment in respect of property management, but also to reduce the consumption of soil and increase the environmental compatibility and the permeability of the soil to urban and nevertheless, to increase green areas in both choices: in the public areas, that in the private (Campos Venuti, 2008). The instrument, in addition to defining the innovative instrumentation perequazione - development rights - intended to create an ideal combination of built and empty, unable to improve the quality of the city.

The plan of R eggio Emilia, intended as a new planning season in which urban planning became aware that the quality of a place depends on the strategies related to environment and nature in the city. There was the transition from an interest in environmental protection, so far marked by a size of a territorial area, to the recognition of the intrinsic relationship between the environmental and the city.

In Italy the interest about environment in the plan of Reggio Emilia was entirely new: the objective point was that the soil was to be permeable and compact. The improvement begins to be read as an example of a new method of qualitative evaluation of key environmental resources (Oliva, 1999; Peraboni, 2010).

New standards were defined, and showed a break with the past, the quantitative characteristic of the only instrument that governed the urban green areas: from the low values of the D.I. 1444/68, the urban planning comes to the indicators of integrated processing, and those of permeabilization of the soil or the consumption of environmental resources (Campeol, 1999).

The green areas are enhanced with functions and the principal concerned the biological necessity, with main capacity of environmental regeneration of the urban areas. For the first time the Italian urban planning - even if experimentally - introduced through the local plan, issues such as the protection of plant and animal habitats (Campos Venuti, Galuzzi, Oliva, Vitillo, 1995)

So the ecological and environmental potential emerged and levered on new structural type: the network.

The network of the green areas, called also the green infrastructure, met a number of planning issues (Benedict & McMahon, 2006; Mell, 2009). In the United

States, since 1990, «green infrastructure was identified as a strategic, multi-scale approach to land conservation and land use planning, with particular emphasis on 'life support functions' of natural processes or ecosystems. In England, the Community Forest programme was established in 1990 by the then Countryside Commission as a pilot project to demonstrate the potential contribution of environmental improvement to economic and social regeneration» (LUC, 2009, 9). Today Green infrastructure has been discussed as providing theoretical, policy and practice led solutions to the continued demands placed upon urban areas. Drawing on a number of principles from Landscape Ecology it promotes the maintenance of ecological resources within connected networks of green spaces, watercourses and greenways.

Green infrastructure planning also supports the sustainable thinking and the adaptation to address current issues of town while proposing innovative, and often community led initiatives to address them (Benedict, McMahon, 2006; Mell, 2011; Tzoulas et al., 2007).

It's possible to define an interconnected network of green space like the element that conserves natural ecosystem values and functions and provides associated benefits to human populations. Green infrastructure differs from conventional approaches to open space planning because it looks at conservation values and actions in concert with land development, growth management and built infrastructure planning. The system of green wedges penetrating and interconnected, was designed to recover and strengthen the system of eco-biological connections and guaranteed the continuity of flora and fauna within the urban areas.

In Italy one of first example of new approach is Reggio Emilia that began with an experience of integrated urban planning and guided by the new systems approach.

It, even though in theory alluded to quality standards, could not start a total qualitative review of quantitative standards.

The proposed model is concretized for the exclusion of new urban expansions and new principles of treatment of green areas. It acknowledged and defined, increasingly, urban complexity, but was unable to articulate freely. The motivation for this is attributed to the rigidity of an inflexible tool, the MASTER PLAN.

For this reason the plan Ferrara corresponds to a new plan oriented to a total integration between planning and ecology. Experience, since 2009, defines a more flexible and less rigid plan, divided into structural and operational. Its environmental system, which is derived from the word "ecological network", not only maximizes the effects of environmental regeneration, but it guarantees a better use of environmental areas that are enriched with new meanings (Schilleci, 1999; Angrilli, 2002; Bennet, 2004; Peraboni, 2010)

The ecological network established and consolidated at the territorial level, winning a local space with new meanings. Infact the Green infrastructure has its origin in two important concepts: linking parks and other green spaces for the benefit of people, and

preserving and linking natural areas to benefit biodiversity and counter habitat fragmentation (Bennett, 2006, 8)

In the urban areas the model suffers more interesting specifications and news articulations (Lotta, 2011). The features, taken by the environmental system in urban areas, is inherent its function, no longer purely environmental. This function is enhanced by social role, thanks to the inclusion of facilities and public places.

In urban areas, to protect biodiversity, preserve and promote no longer remains confined to the environmental meanings, but it crosses in the urban ecology, also comes to the social component of the urban habitat: the human component.

In Ferrara, the city is understood as a large system of relations and an intimate connection between environment and society. In this way, the plan assumes a role of contact between the community and the green area, which gives way to a genuine need for protection of environmental resources (Bodin, Crona, Ernstson, 2006). Restore contact between man and nature means to start an alternative city defined by the planning instrument "green city", that binds the different parts and peoples through a network of connections and places of ecological regeneration and self-production, where it is possible created a new social reality, maintenance and quality assurance of the human habitat.

The MUNICIPAL STRUCTURAL PLAN of Ferrara leverages on value of the collective space of the environmental system and the green network for future development of the city. The ultimate aims of integration, between ecology and urbanism may affect the involvement of the inhabitants in the active management of common goods and their development, both as a incentive and growth of a sense of belonging to a place, and as a measure to safeguard of environmental areas from carelessness (art. 2 NTA, MUNICIPAL STRUCTURAL PLAN).

2. Conclusions

Since 2009 the construction of the environmental system comes to the definition of urban ecological network and promotes, in addition to environmental protection in urban areas, the construction of the community.

The city recovers the environmental dimension in a complex system and leaning toward «luogo moderno reale e simbolico di esercizio civile» (degli Espinosa, 1990, 236) On the other hand Castells (1996) recognizes the environmental issue

and the social forces, that draw life from it, some of the main engines of transformation of contemporary society.

The case studies highlight that the environmental system characterized by a heterogeneous themes concerned, ever more, the quality characteristics.

In a different way, from a purely environmental issue, introduced by Reggio Emilia, the case of Ferrara open to a more urban and social aspects, in which environmental quality is the core component. It is necessary greater openness and integration of urban planning in other disciplines to resolve the environmental issue. And it's likely that the new structure of the Plan will automatically trigger this effect?

The lack of an established practice of co-management planning in the urban environmental heritage has its negative repercussions, but, at the same time, could the new form of plan undermine the only approach so far regulated and generally followed?

Further compounding an already difficult situation is the predominance of a strong matrix urban centric planning practices aimed at solving spatial problems of urban development. This is an understandable interest, if we reread the phenomenon from the training phase of the discipline, was born and developed to pursue and address the growth of towns and cities, and today shows its inadequacy in the changed context, where instances of redevelopment, modernization and transformation of the existing, need for protection of environmental resources prevail (Gambino 1994; Ricci, 2005).

Obviously, as reported by Oliva (2008), we cannot propose a planning model such as that established by first law of 1942. It is necessary apply the experience more fruitful through the Structural plan.

A plan has to provide management flexibility, to intervene on green areas, to establish decisions essential and not negotiable. If, therefore, there must be a general strategy to guide the process of land transformation is equally true that in Italy, the need for urban reform series, it becomes ever more essential.

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