The Urban Scale of Nature: Stratification, Contamination and Sustainability

Nilda Valentin

Every city is, to some extent, the sum of the stratification of different urban, architectural, and natural systems, which define through the centuries the physical, social, cultural and economic development of a place. Since modernization and rapid urban development have often put aside the importance of livability of cities in the name of progress, and more than half of the humanity now lives in urban areas, it is essential to study the impact of urbanization in the environment, in people, in the development of the city, in order to identify the strategies and policies that can improve the sustainability of our cities. In particular, the relationship natural-built is to be explored as one of the main determinant facts to enhance the quality of urban life.

Nature and cities

A new kind of consciousness for the environment, for the green system of the city as well as for the entire ecological system of the world in the last 50 years has given rise to the development of innovative ways to find a balance between architecture and nature. New research on the use of alternative energy sources, on the conservation of natural resources and on the recycling of materials, as well as new studies on the causes of environmental degradation, such as the phenomena of deforestation, air and water contamination, has fostered the emergence of a new design approach attentive to the choice of materials, the use of new building techniques and technologies, as well as the development of urban and
architectural strategies regarding the shape form and location of projects. This new interest for the environment has led to the development of green projects with great repercussions on the nature of the city.

In fact, we can find that nature and the city are slowly becoming a unique hybrid entity of natural forms and built functions, often without limits of continuity between one another. Many parks, gardens, and squares are becoming urbanized and geometrized natural areas, while new constructions invade the last green areas of the city.

In this process, the quality of physical and environmental transformation, is an element we can use to measure not only the level of contamination between parts, but also the level of sustainability of the city.

It is no coincidence that the green design approach is one of the main concerns of the current architectural debate, interested not only in the use of energy savings strategies and systems, but also in the development of new responsible and ecological aesthetic solutions.

Indeed, today the term green in projects has many implications that extend from the development of new open recreational areas to the use of particular building types and technologies. Artificial landscapes as well as underground or camouflaged architectures are some of the solutions to mediate between environment and cities on the probable search for a new type of archi-ecological utopia.
'Artificial' green areas
The rational development of the territory either for cultivation or urbanization is one of the main factors responsible for the progressive anthropization of the landscape. The geometric regularization of the territory is a constant process in human history that, through times and cultures, has always tried to influence the architectural and urban culture in the struggle of humans to control the environment.

The design of green open spaces, however, by living a condition ranging between rationalism and romanticism, between instances of regularity and picturesque, often becomes a territory of experimentation developing meanings and connotations that go beyond the area of the intervention. The new geometrization of the landscape, in contrast to the preservation of the natural state of the place, many times seems to justify its physical sign on the context by suggesting a formal contamination with the city, in the search to create a possible new urban poetic. A poetic that sometimes becomes uncontrolled with the overabundant use of formalisms, allusions, abstractions and allegories.

The proper and balanced geometrization of the natural landscape is probably one of the best ways to suggest the development of a new order in the city. The new artificial landscape becomes in this way a sort of urban manifesto that, through the reorganization of the fragmented territory, enables the legibility, measurability and recognizibility of the open green areas at the urban scale.
Underground and camouflaged architecture

The decision to develop a low impact green project, through either the creation of an underground structure or a camouflaged architecture, is largely dictated by the functions, which should be compatible with the proposed solution, by the topographical and geological conditions of the site and by the character of the context.

Both the underground architecture, even with a high cost of construction, and buildings camouflaged into the context through the imitation of natural forms, or the use of green roofs and facades, offer urban and ecological advantages that make them preferable to traditional interventions. Although these types of construction have been often associated with the label of faceless or non-architecture, the inherent advantages are the reduced visibility of buildings in circumstances in which it is important either to preserve the natural or historic character of the place, or to hide whole or parts of invasive and undesirable structures in the city, or to develop an ecological architectural image in pace with the times.

The so-called 'non-architecture' helps to improve the urban aesthetics by inserting square meters in the city without suffocating an environment which is often already saturated by a maze of linguistic expressions. In this way the project becomes an image at the service of the city. The project of architecture that, through the total or partial cancellation of its volumes, produces spaces for the city in continuity with the natural context, encourages a new kind of architecture-nature relationship based on a new type of mutual dependence.

In conclusion, the relationship between architecture-nature, producing conditions of affinity, detachment, stratification and contamination with the context, is a strategic argument to be faced with ecological responsibility given that it involves not only the immediate areas of the project, but also the entire Earth system.

Since a new ecological awareness is giving to Nature the strategic role of mediator between natural environment and new developments, humans are the ones to hold the responsibility not only to create a better quality of the living environment but also to transform the city in a qualifying urban vision. The city of the future will be more and more a 'city of nature', if it is able to compete on the international scene through the development of its sustainable identity.

Proposal for the square and monument to the Fallen in Nasiriyah, (ex-aquo 2° phase) - N. Valentin w/ R. Lenci (tl), S. Catalano, F. Pratesi

N.V. - Researcher and Assistant Professor in Urban and Architectural Design, Sapienza Univ. of Rome, Ph.D. in Architecture (Sapienza) M. Architecture & M. City and Reg. Planning (Georgia Inst. of Tech.)